

# Washington

# 1997

Issued May 2000

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## 1997 Economic Census

*Manufacturing*

Geographic Area Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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Secretary

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Deputy Secretary

**Economics**

**and Statistics**

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**Robert J. Shapiro,**

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# Introduction to the Economic Census

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## PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

## ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

## RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

## GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

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required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

## **BASIS OF REPORTING**

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

## **DOLLAR VALUES**

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

## **AVAILABILITY OF ADDITIONAL DATA**

### **Reports in Print and Electronic Media**

All results of the 1997 Economic Census are available on the Census Bureau Internet site ([www.census.gov](http://www.census.gov)) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

### **Special Tabulations**

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673  
Service Sector Statistics Division 301-457-2668

## **HISTORICAL INFORMATION**

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

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## SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at [www.census.gov/econguide](http://www.census.gov/econguide). More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at [www.census.gov/econ/www/history.html](http://www.census.gov/econ/www/history.html).

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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# Manufacturing

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## SCOPE

The 1997 Economic Census – Manufacturing covers all manufacturing establishments with one or more paid employees. Manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products. The assembly of components into new products is also considered manufacturing, except when it is appropriately classified as construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. Also included in the manufacturing sector are some establishments that make products by hand, like custom tailors and the makers of custom draperies. While manufacturers typically do not sell to the public, some establishments like bakeries and candy stores that make products on the premises may be included.

While logging and publishing are no longer in the scope of manufacturing, data for these industries are included in the manufacturing industry reports, but are not included in the manufacturing state, summary, and other reports.

## GENERAL

This report, from the 1997 Economic Census – Manufacturing, is one of a series of 480 industry reports and 51 geographic area reports, each of which provides statistics for individual industries or states, respectively. Seven of the industry reports are for industries no longer in the manufacturing sector but are included with manufacturing for the 1997 census year. Also included for this sector are General, Product, and Materials Consumed Summary reports, a special report on Concentration Ratios in Manufacturing, and data files on Location of Manufacturing Plants.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, capital expenditures, etc. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more in the industry.

State reports, which include the District of Columbia, present similar statistics at the “all manufacturing” level for each state and its metropolitan areas (MAs) with 250

employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports, as well as revisions to the data made after the release of the industry and state reports.

The Products and Materials Consumed reports summarize the products and materials data published in the industry reports. The Product Summary report also includes data from the Current Industrial Reports (CIR) and a special table with data for products that are primary to more than one industry, which are not in the industry reports.

The Concentration Ratios report publishes data on the percentage of value of shipments accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Hirschmann-Herfindahl Indexes for each industry.

The Location of Manufacturing data files contain statistics on the number of establishments for the three- and six-digit NAICS industry by state, county, place, and ZIP Code by employment-size of the establishment.

## GEOGRAPHIC AREAS COVERED

Statistics at the six-digit NAICS industry level are shown for states and the District of Columbia in both the state and industry reports for cells with 100 employees or more.

The state reports also include data at the “all manufacturing” level for a variety of geographies that meet the employment criteria.

Data are available for the metropolitan areas (MAs) with 250 employees or more. The term MA is a general term used to encompass all of the specifically defined metropolitan areas. A consolidated metropolitan statistical area (CMSA) is made up of two or more contiguous primary metropolitan statistical areas (PMSAs) with a combined population of at least 1 million. A PMSA is a subdivision of a CMSA that demonstrates very strong internal economic and social links separate from the ties to other portions of the CMSA. A metropolitan statistical area (MSA) is an integrated economic and social unit with a population of at least 50,000. An MA is made up of one or more counties meeting standards of metropolitan character. In New England, cities and towns, rather than counties, are the

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component geographic units. Determination of the MAs was made by the Office of Management and Budget (OMB) as of June 30, 1997. The population estimates were from the 1990 Census of Population or a subsequent special census. When applicable, the make-up of an MA is included in Appendix E. Changes to geographical boundaries are noted in Appendix D.

The state reports include data for counties with 500 employees or more. These are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs and census areas. Maryland, Missouri, Nevada, and Virginia have one or more places that are independent of county organizations. These places are treated as counties and places. The counties and places are defined as of January 1, 1997.

The state reports include data for places with 500 employees or more. Places are typically cities, towns, and villages. They may be incorporated municipalities, semi-independent municipalities, special economic urban areas (SEUAs), or other place equivalents.

The state reports also include data for consolidated cities with 500 employees or more. Consolidated cities are made up of separately incorporated municipalities.

## **COMPARABILITY OF THE 1992 AND 1997 CENSUSES**

The adoption of the North American Industry Classification System (NAICS) has had a major impact on the comparability of data between the 1992 and 1997 censuses. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past. If industries are not comparable between the two censuses, historic data are not shown. When applicable, Appendix G shows the product class and product comparability between the two systems.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those leaving manufacturing are logging and portions of publishing. Prominent among the industries coming into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. Data for the industries coming into manufacturing as well as those leaving manufacturing are included in the manufacturing industry report series for 1997. However, the state and summary reports only include data for industries in the NAICS definition of manufacturing.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with manufacturing are not included along side the manufacturing data. This change affects data in the state reports and the general summary.

## **DISCLOSURE**

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure, and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures that can be suppressed even though value of shipments data are published.

## **AVAILABILITY OF MORE FREQUENT ECONOMIC DATA**

The Census Bureau conducts the Annual Survey of Manufactures (ASM) in each of the 4 years between the economic censuses. The ASM is a probability-based sample of approximately 58,000 establishments and collects many of the same industry statistics (including employment, payroll, value of shipments, etc.) as the economic census. However, there are selected statistics not included in the ASM. Among these are the number of companies and establishments, detailed product and materials data, and substate geographic data.

In addition to the ASM, the Census Bureau conducts a Current Industrial Reports (CIR) program. The CIR publishes detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. For the 1997 Economic Census – Manufacturing, the annual CIR data are included in the Product Summary report.

The Census Bureau also conducts the monthly Manufacturers' Shipments, Inventories, and Orders (M3) program, which publishes detailed statistics for manufacturing industries at the U.S. level.

**Table 1. Industry Statistics for the State: 1997**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)					Wages (\$1,000)
<b>WASHINGTON</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>7 801</b>	<b>2 159</b>	<b>328 511</b>	<b>13 004 063</b>	<b>213 330</b>	<b>425 003</b>	<b>7 046 371</b>	<b>30 434 838</b>	<b>49 023 723</b>	<b>78 852 486</b>	<b>2 640 230</b>
311	Food mfg . . . . .	1	734	283	36 066	947 376	27 977	54 491	649 406	3 391 853	5 307 402	8 692 715	247 081
3111	Animal food mfg . . . . .	-	31	9	477	15 037	292	567	8 037	142 322	198 241	339 479	6 682
31111	Animal food mfg . . . . .	-	31	9	477	15 037	292	567	8 037	142 322	198 241	339 479	6 682
311119	Other animal food mfg . . . . .	1	29	7	e	D	D	D	D	D	D	D	D
3112	Grain & oilseed milling . . . .	-	23	7	564	22 223	342	718	12 393	75 575	181 941	255 244	22 162
31121	Flour milling & malt mfg . . . .	-	12	3	374	15 781	244	515	9 155	45 516	158 501	203 994	13 786
311211	Flour milling . . . . .	-	10	2	c	D	D	D	D	D	D	D	D
311213	Malt mfg . . . . .	-	2	1	c	D	D	D	D	D	D	D	D
31122	Starch & vegetable fats & oils mfg . . . . .	1	9	4	c	D	D	D	D	D	D	D	D
3113	Sugar & confectionery product mfg . . . . .	1	47	8	769	16 593	574	912	9 218	47 631	33 081	81 224	1 555
31133	Confectionery mfg from purchased chocolate . . . . .	1	29	4	424	10 263	293	550	5 010	29 966	21 192	51 134	879
311330	Confectionery mfg from purchased chocolate . . . . .	1	29	4	424	10 263	293	550	5 010	29 966	21 192	51 134	879
31134	Nonchocolate confectionery mfg . . . . .	2	14	2	280	4 667	234	287	3 095	14 281	9 378	24 230	D
311340	Nonchocolate confectionery mfg . . . . .	2	14	2	280	4 667	234	287	3 095	14 281	9 378	24 230	D
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	90	59	11 797	298 146	10 447	20 270	227 954	1 183 539	1 370 143	2 566 124	94 555
31141	Frozen food mfg . . . . .	1	41	30	7 269	183 995	6 441	12 311	141 309	708 179	695 817	1 412 977	66 069
311411	Frozen fruit, juice, & vegetable mfg . . . . .	1	30	26	6 934	175 365	6 169	11 785	135 297	671 962	672 718	1 353 660	65 434
311412	Frozen specialty food mfg . . . . .	-	11	4	335	8 630	272	526	6 012	36 217	23 099	59 317	635
31142	Fruit & vegetable canning, pickling, & drying . . . . .	-	49	29	4 528	114 151	4 006	7 959	86 645	475 360	674 326	1 153 147	28 486
311421	Fruit & vegetable canning . . . . .	-	35	19	3 183	76 495	2 833	5 413	55 721	236 422	399 806	635 258	15 659
311422	Specialty canning . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
311423	Dried & dehydrated food mfg . . . . .	-	13	9	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg . . . . .	2	36	22	1 998	64 018	1 276	2 458	43 928	242 569	759 616	999 349	28 800
31151	Dairy product (except frozen) mfg . . . . .	1	25	17	1 631	51 165	977	1 825	33 453	208 643	671 755	875 897	25 273
311511	Fluid milk mfg . . . . .	2	13	11	1 049	31 916	516	947	17 723	105 934	251 259	354 643	D
311512	Creamery butter mfg . . . . .	-	2	1	c	D	D	D	D	D	D	D	D
311513	Cheese mfg . . . . .	-	6	3	e	D	D	D	D	D	D	D	D
311514	Dry, condensed, & evaporated dairy product mfg . . . . .	-	4	2	c	D	D	D	D	D	D	D	D
31152	Ice cream & frozen dessert mfg . . . . .	7	11	5	367	12 853	299	633	10 475	33 926	87 861	123 452	3 527
311520	Ice cream & frozen dessert mfg . . . . .	7	11	5	367	12 853	299	633	10 475	33 926	87 861	123 452	3 527
3116	Meat product mfg . . . . .	1	62	28	4 396	99 581	3 685	7 318	75 487	336 970	1 318 730	1 656 675	22 355
31161	Animal slaughtering & processing . . . . .	1	62	28	4 396	99 581	3 685	7 318	75 487	336 970	1 318 730	1 656 675	22 355
311611	Animal (except poultry) slaughtering . . . . .	-	25	9	2 464	51 354	2 168	4 685	43 190	163 279	1 052 151	1 211 485	12 620
311612	Meat processed from carcasses . . . . .	4	30	12	1 152	29 024	963	1 726	23 099	121 619	176 270	303 564	6 621
311613	Rendering & meat byproduct processing . . . . .	5	3	3	c	D	D	D	D	D	D	D	D
311615	Poultry processing . . . . .	5	4	4	f	D	D	D	D	D	D	D	D
3117	Seafood product preparation & packaging . . . . .	1	120	78	7 299	186 226	6 206	12 205	146 137	485 694	686 284	1 170 892	26 100
31171	Seafood product preparation & packaging . . . . .	1	120	78	7 299	186 226	6 206	12 205	146 137	485 694	686 284	1 170 892	26 100
311711	Seafood canning . . . . .	3	27	10	593	11 933	446	676	6 982	31 394	40 290	71 593	1 676
311712	Fresh & frozen seafood processing . . . . .	1	93	68	6 706	174 293	5 760	11 529	139 155	454 300	645 994	1 099 299	24 424
3118	Bakeries & tortilla mfg . . . . .	1	254	52	6 776	185 047	3 639	7 008	89 899	511 514	411 019	921 078	30 694
31181	Bread & bakery product mfg . . . . .	2	219	38	5 403	146 032	2 689	5 313	69 568	314 451	234 147	549 458	16 957
311811	Retail bakeries . . . . .	5	136	5	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries . . . . .	2	79	31	4 518	131 855	2 081	4 409	61 288	275 659	202 116	477 359	15 136
311813	Frozen cakes, pies, & other pastries mfg . . . . .	-	4	2	c	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg . . . . .	-	32	12	g	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg . . . . .	3	17	5	f	D	D	D	D	D	D	D	3 294
311822	Flour mixes & dough mfg from purchased flour . . . . .	-	7	4	475	19 166	314	631	8 870	125 743	121 680	242 172	9 363
311823	Dry pasta mfg . . . . .	-	8	3	182	4 900	122	249	2 826	38 771	19 117	60 200	D
31183	Tortilla mfg . . . . .	-	3	2	c	D	D	D	D	D	D	D	D
311830	Tortilla mfg . . . . .	-	3	2	c	D	D	D	D	D	D	D	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WASHINGTON—Con. Manufacturing— Con.</b>												
311	Food mfg—Con.												
3119	Other food mfg . . . . .	—	71	20	1 990	60 505	1 516	3 035	36 353	366 039	348 347	702 650	14 178
31191	Snack food mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
311919	Other snack food mfg . . . . .	—	5	3	f	D	D	D	D	D	D	D	D
31192	Coffee & tea mfg . . . . .	—	11	3	e	D	D	D	D	D	D	D	429
311920	Coffee & tea mfg . . . . .	—	11	3	e	D	D	D	D	D	D	D	429
31194	Seasoning & dressing mfg . . . . .	—	18	5		9 998	233	377	4 892	25 760	38 839	64 712	1 690
311941	Mayonnaise, dressing, & other prepared sauce mfg . . . . .	1	9	1	146	3 689	112	198	2 175	4 951	17 363	22 314	533
311942	Spice & extract mfg . . . . .	—	9	4	230	6 309	121	179	2 717	20 809	21 476	42 398	1 157
31199	All other food mfg . . . . .	2	35	8	464	11 064	363	619	5 766	35 343	33 488	68 975	2 486
311991	Perishable prepared food mfg . . . . .	—	13	4	260	7 127	202	356	3 110	22 053	16 235	38 404	1 604
311999	All other miscellaneous food mfg . . . . .	3	22	4	204	3 937	161	263	2 656	13 290	17 253	30 571	882
312	Beverage & tobacco product mfg . . . . .	1	99	34	3 603	99 496	1 718	3 101	48 762	548 727	646 008	1 161 349	41 611
3121	Beverage mfg . . . . .	1	99	34	3 603	99 496	1 718	3 101	48 762	548 727	646 008	1 161 349	41 611
31211	Soft drink & ice mfg . . . . .	2	26	17	1 726	51 684	844	1 530	23 797	265 103	413 645	673 649	D
312111	Soft drink mfg . . . . .	2	18	15	1 623	49 560	795	1 434	22 966	261 263	411 998	668 156	13 245
312113	Ice mfg . . . . .	—	8	2	103	2 124	49	96	831	3 840	1 647	5 493	D
31212	Breweries . . . . .	1	34	13	1 360	32 821	683	1 265	20 518	157 541	147 479	302 580	7 234
312120	Breweries . . . . .	1	34	13	1 360	32 821	683	1 265	20 518	157 541	147 479	302 580	7 234
31213	Wineries . . . . .	—	38	4	f	D	D	D	D	D	D	D	20 653
312130	Wineries . . . . .	—	38	4	f	D	D	D	D	D	D	D	20 653
313	Textile mills . . . . .	1	48	7	928	26 648	715	1 303	18 362	62 171	121 095	182 328	20 508
3132	Fabric mills . . . . .	1	30	4	661	18 477	533	961	13 633	34 809	57 560	91 748	D
31321	Broadwoven fabric mills . . . . .	1	16	2	383	8 621	308	447	6 468	9 874	16 746	26 020	645
313210	Broadwoven fabric mills . . . . .	1	16	2	383	8 621	308	447	6 468	9 874	16 746	26 020	645
31323	Nonwoven fabric mills . . . . .	—	5	1	200	8 307	160	379	6 080	22 001	39 663	61 743	D
313230	Nonwoven fabric mills . . . . .	—	5	1	200	8 307	160	379	6 080	22 001	39 663	61 743	D
3133	Textile & fabric finishing & fabric coating mills . . . . .	1	17	3	e	D	D	D	D	D	D	D	D
31332	Fabric coating mills . . . . .	—	3	3	225	6 726	149	288	4 171	20 221	55 451	75 307	D
313320	Fabric coating mills . . . . .	—	3	3	225	6 726	149	288	4 171	20 221	55 451	75 307	D
314	Textile product mills . . . . .	1	177	29	2 173	54 031	1 677	3 167	32 500	112 340	94 470	206 308	4 546
3141	Textile furnishings mills . . . . .	1	38	4	297	9 057	211	472	6 150	13 755	17 743	30 906	332
31412	Curtain & linen mills . . . . .	1	36	4	e	D	D	D	D	D	D	D	D
314121	Curtain & drapery mills . . . . .	1	30	2	c	D	D	D	D	D	D	D	D
314129	Other household textile product mills . . . . .	1	6	2	160	6 605	103	276	4 674	8 508	12 419	20 368	166
3149	Other textile product mills . . . . .	1	139	25	1 876	44 974	1 466	2 695	26 350	98 585	76 727	175 402	4 214
31491	Textile bag & canvas mills . . . . .	1	77	13	1 005	20 751	831	1 463	13 686	42 600	35 012	77 631	1 784
314911	Textile bag mills . . . . .	1	22	8	572	9 359	498	872	6 834	24 023	19 623	43 593	426
314912	Canvas & related product mills . . . . .	3	55	5	433	11 392	333	591	6 852	18 577	15 389	34 038	1 358
31499	All other textile product mills . . . . .	1	62	12	871	24 223	635	1 232	12 664	55 985	41 715	97 771	2 430
314991	Rope, cordage, & twine mills . . . . .	—	12	6	430	14 977	296	633	7 290	37 897	27 394	65 401	1 709
314999	All other miscellaneous textile product mills . . . . .	4	50	6	441	9 246	339	599	5 374	18 088	14 321	32 370	721
315	Apparel mfg . . . . .	1	170	52	4 918	94 244	4 367	8 559	71 944	177 343	209 803	385 016	4 142
3151	Apparel knitting mills . . . . .	7	6	2	138	2 976	124	291	2 152	6 030	2 176	8 205	111
31519	Other apparel knitting mills . . . . .	7	6	2	138	2 976	124	291	2 152	6 030	2 176	8 205	111
315191	Outerwear knitting mills . . . . .	7	6	2	138	2 976	124	291	2 152	6 030	2 176	8 205	111
3152	Cut & sew apparel mfg . . . . .	1	128	43	4 385	82 178	3 910	7 560	63 365	155 990	195 086	349 225	3 162
31521	Cut & sew apparel contractors . . . . .	2	62	21	1 859	29 630	1 770	3 312	26 482	48 751	9 035	57 702	957
315211	Men's & boys' cut & sew apparel contractors . . . . .	—	17	15	1 219	20 128	1 164	2 259	18 366	32 364	4 464	36 821	462
315212	Women's, girls', & infants' cut & sew apparel contractors . . . . .	5	45	6	640	9 502	606	1 053	8 116	16 387	4 571	20 881	495
31522	Men's & boys' cut & sew apparel mfg . . . . .	—	20	9	1 083	26 483	905	1 767	17 887	39 106	85 617	126 585	1 010
315224	Men's & boys' cut & sew trouser, slack, & jean mfg . . . . .	—	2	1	c	D	D	D	D	D	D	D	D
315228	Men's & boys' cut & sew other outerwear mfg . . . . .	—	16	7	886	23 573	721	1 478	15 453	37 174	79 519	118 347	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
315	Apparel mfg—Con.												
3152	Cut & sew apparel mfg—Con.												
31523	Women's & girls' cut & sew apparel mfg . . . . .	—	28	10	1 153	22 009	1 002	2 078	16 199	60 778	94 148	151 471	768
315234	Women's & girls' cut & sew suit, coat, skirt mfg . . . . .	—	5	1	c	D	D	D	D	D	D	D	105
315239	Women's & girls' cut & sew other outerwear mfg . . . . .	—	11	6	854	16 054	757	1 621	12 484	46 589	62 595	107 590	607
31529	Other cut & sew apparel mfg . . . . .	6	18	3	290	4 056	233	403	2 797	7 355	6 286	13 467	427
315299	All other cut & sew apparel mfg . . . . .	6	14	2	239	3 196	193	330	2 119	5 401	2 807	8 077	384
3159	Apparel accessories & other apparel mfg . . . . .	1	36	7	395	9 090	333	708	6 427	15 323	12 541	27 586	869
31599	Apparel accessories & other apparel mfg . . . . .	1	36	7	395	9 090	333	708	6 427	15 323	12 541	27 586	869
315992	Glove & mitten mfg . . . . .	—	4	3	125	2 268	108	210	1 854	2 049	5 125	7 395	28
315999	Other apparel accessories & other apparel mfg . . . . .	1	26	3	227	6 005	193	420	4 093	11 587	6 641	17 758	816
316	Leather & allied product mfg . . . . .	—	31	7	775	15 117	556	1 065	9 256	78 350	66 749	140 457	1 072
3162	Footwear mfg . . . . .	1	4	1	c	D	D	D	D	D	D	D	D
31621	Footwear mfg . . . . .	1	4	1	c	D	D	D	D	D	D	D	D
316213	Men's footwear (except athletic) mfg . . . . .	1	2	1	c	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg . . . . .	—	23	6	599	11 281	418	803	6 627	69 853	59 300	124 726	770
31699	Other leather & allied product mfg . . . . .	—	23	6	599	11 281	418	803	6 627	69 853	59 300	124 726	770
316991	Luggage mfg . . . . .	—	8	4	389	7 022	266	490	4 215	61 507	49 081	105 468	346
321	Wood product mfg . . . . .	1	589	216	22 196	647 891	18 817	38 246	502 998	1 451 407	2 993 752	4 415 151	165 094
3211	Sawmills & wood preservation . . . . .	1	201	84	10 271	344 373	8 863	18 762	276 444	830 562	1 877 382	2 681 775	121 171
32111	Sawmills & wood preservation . . . . .	1	201	84	10 271	344 373	8 863	18 762	276 444	830 562	1 877 382	2 681 775	121 171
321113	Sawmills . . . . .	1	189	74	9 664	325 194	8 389	17 837	263 857	759 440	1 740 864	2 472 190	119 938
321114	Wood preservation . . . . .	—	12	10	607	19 179	474	925	12 587	71 122	136 518	209 585	1 233
3212	Veneer, plywood, & engineered wood product mfg . . . . .	—	82	47	4 214	118 245	3 483	7 202	91 312	221 450	462 887	685 219	16 005
32121	Veneer, plywood, & engineered wood product mfg . . . . .	—	82	47	4 214	118 245	3 483	7 202	91 312	221 450	462 887	685 219	16 005
321211	Hardwood veneer & plywood mfg . . . . .	—	5	3	578	14 807	496	1 069	11 188	22 488	50 252	70 488	2 033
321212	Softwood veneer & plywood mfg . . . . .	—	17	14	1 899	60 239	1 704	3 618	52 256	95 942	282 329	382 361	7 309
321213	Engineered wood member (except truss) mfg . . . . .	—	3	3	156	3 473	124	268	2 723	8 474	18 340	26 810	537
321214	Truss mfg . . . . .	2	48	23	1 156	27 555	808	1 518	16 002	57 463	53 975	111 366	1 917
321219	Reconstituted wood product mfg . . . . .	—	9	4	425	12 171	351	729	9 143	37 083	57 991	94 194	4 209
3219	Other wood product mfg . . . . .	1	306	85	7 711	185 273	6 471	12 282	135 242	399 395	653 483	1 048 157	27 918
32191	Millwork . . . . .	1	147	53	4 760	120 795	4 104	8 228	93 900	271 612	462 078	730 571	22 966
321911	Wood window & door mfg . . . . .	1	65	23	2 164	56 785	1 815	3 506	42 644	122 742	173 001	296 270	3 742
321912	Cut stock, resawing lumber, & planing . . . . .	—	50	21	1 818	43 854	1 651	3 348	37 211	109 225	228 188	334 470	14 814
321918	Other millwork (including flooring) . . . . .	2	32	9	778	20 156	638	1 374	14 045	39 645	60 889	99 831	4 410
32192	Wood container & pallet mfg . . . . .	—	47	14	914	18 122	752	1 307	11 986	31 919	50 906	81 871	1 562
321920	Wood container & pallet mfg . . . . .	—	47	14	914	18 122	752	1 307	11 986	31 919	50 906	81 871	1 562
32199	All other wood product mfg . . . . .	1	112	18	2 037	46 356	1 615	2 747	29 356	95 864	140 499	235 715	3 390
321991	Manufactured home (mobile home) mfg . . . . .	—	6	4	889	23 283	718	1 202	13 679	45 448	62 697	108 781	550
321992	Prefabricated wood building mfg . . . . .	4	35	4	432	9 006	302	523	5 233	21 140	23 995	45 157	1 346
321999	All other miscellaneous wood product mfg . . . . .	2	71	10	716	14 067	595	1 022	10 444	29 276	53 807	81 777	1 494

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
322	Paper mfg .....	-	118	80	14 958	675 477	11 585	23 522	489 160	2 167 824	2 565 769	4 719 501	320 206
3221	Pulp, paper, & paperboard mills .....	-	19	19	9 941	499 157	7 865	16 148	372 453	1 684 370	1 794 241	3 464 778	266 004
32211	Pulp mills .....	-	2	2	e	D	D	D	D	D	D	D	D
322110	Pulp mills .....	-	2	2	e	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	12	12	6 229	305 523	5 094	10 462	233 573	1 267 987	1 211 213	2 452 478	D
322121	Paper (except newsprint) mills .....	-	7	7	4 830	220 534	4 028	8 135	171 442	841 508	763 911	1 578 092	108 021
322122	Newsprint mills .....	-	5	5	1 399	84 989	1 066	2 327	62 131	426 479	447 302	874 386	D
32213	Paperboard mills .....	-	5	5	h	D	D	D	D	D	D	D	119 460
322130	Paperboard mills .....	-	5	5	h	D	D	D	D	D	D	D	119 460
3222	Converted paper product mfg .....	-	99	61	5 017	176 320	3 720	7 374	116 707	483 454	771 528	1 254 723	54 202
32221	Paperboard container mfg .....	-	42	36	2 957	111 841	2 207	4 505	75 306	241 773	473 985	713 971	38 748
322211	Corrugated & solid fiber box mfg .....	-	27	22	2 043	79 886	1 513	3 079	52 611	170 188	364 755	532 852	28 967
322212	Folding paperboard box mfg .....	-	7	7	540	18 589	395	841	12 593	38 153	50 553	88 897	3 691
322214	Fiber can, tube, drum, & similar products mfg .....	-	3	3	c	D	D	D	D	D	D	D	D
322215	Nonfolding sanitary food container mfg .....	-	2	1	c	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	-	19	8	842	28 393	678	1 322	20 210	80 715	164 709	245 993	9 255
322222	Coated & laminated paper mfg .....	2	11	3	c	D	D	D	D	D	D	D	5 850
322224	Uncoated paper & multiwall bag mfg .....	-	5	4	587	18 072	491	934	13 199	46 993	46 984	93 084	D
32223	Stationery product mfg ..	1	18	8	656	18 442	414	827	11 161	47 474	57 211	104 397	1 637
322232	Envelope mfg .....	2	8	6	502	13 878	302	588	8 596	35 463	30 198	64 576	1 229
32229	Other converted paper product mfg .....	-	20	9	562	17 644	421	720	10 030	113 492	75 623	190 362	4 562
322291	Sanitary paper product mfg .....	-	1	1	c	D	D	D	D	D	D	D	D
322299	All other converted paper product mfg .....	-	19	8	e	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	2	857	135	11 735	357 586	7 935	13 996	208 415	726 131	412 978	1 140 940	53 337
3231	Printing & related support activities .....	2	857	135	11 735	357 586	7 935	13 996	208 415	726 131	412 978	1 140 940	53 337
32311	Printing .....	2	780	120	10 544	311 132	7 074	12 296	179 689	630 598	397 353	1 030 185	50 030
323110	Commercial lithographic printing ..	2	362	69	5 834	188 620	3 794	7 069	106 768	359 936	229 161	589 715	34 696
323112	Commercial flexographic printing ..	-	12	7	302	9 738	161	309	4 251	14 639	12 455	27 018	707
323113	Commercial screen printing .....	3	105	12	907	19 938	636	1 033	10 976	43 433	28 065	71 560	2 792
323114	Quick printing .....	1	179	8	1 121	26 858	798	1 252	17 399	58 172	29 682	87 725	4 715
323115	Digital printing .....	4	14	3	152	3 713	111	180	2 187	7 646	3 297	10 827	641
323116	Manifold business form printing .....	-	19	11	911	29 936	694	1 158	20 127	86 035	43 119	129 824	3 521
323117	Book printing .....	-	10	4	774	17 890	491	558	9 140	25 686	26 760	54 185	1 147
323119	Other commercial printing .....	4	71	6	489	12 723	347	639	7 801	30 137	23 578	53 206	1 740
32312	Support activities for printing .....	-	77	15	1 191	46 454	861	1 700	28 726	95 533	15 625	110 755	3 307
323121	Tradebinding & related work .....	-	28	7	366	9 702	294	548	6 374	17 439	2 640	20 056	704
323122	Prepress services .....	-	49	8	825	36 752	567	1 152	22 352	78 094	12 985	90 699	2 603
324	Petroleum & coal products mfg .....	-	31	16	2 185	115 743	1 320	3 195	64 959	820 860	4 573 547	5 393 828	83 370
3241	Petroleum & coal products mfg .....	-	31	16	2 185	115 743	1 320	3 195	64 959	820 860	4 573 547	5 393 828	83 370
32411	Petroleum refineries .....	-	8	7	1 675	99 031	974	2 471	53 638	734 550	4 468 411	5 202 126	79 152
324110	Petroleum refineries ..	-	8	7	1 675	99 031	974	2 471	53 638	734 550	4 468 411	5 202 126	79 152
32412	Asphalt paving, roofing, & saturated materials mfg .....	1	17	7	434	14 359	285	611	9 720	75 881	81 259	157 410	D
324121	Asphalt paving mixture & block mfg .....	2	14	5	c	D	D	D	D	D	D	D	D
324122	Asphalt shingle & coating materials mfg .....	-	3	2	c	D	D	D	D	D	D	D	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg . . . . .	1	230	70	5 558	256 202	3 154	7 154	115 145	965 184	922 457	1 891 543	93 475
3251	Basic chemical mfg . . . . .	—	45	17	1 898	104 687	1 092	2 631	51 705	423 807	294 336	733 861	49 669
32512	Industrial gas mfg . . . . .	1	12	3	169	7 550	64	150	2 501	50 514	15 661	66 156	12 720
325120	Industrial gas mfg . . . . .	1	12	3	169	7 550	64	150	2 501	50 514	15 661	66 156	12 720
32518	Other basic inorganic chemical mfg . . . . .	—	19	8	1 365	79 089	815	2 008	39 444	266 054	194 710	476 009	29 481
325181	Alkalies & chlorine mfg . . . . .	—	2	2	c	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg . . . . .	—	17	6	g	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg . . . . .	1	14	6	364	18 048	213	473	9 760	107 239	83 965	191 696	7 468
325199	All other basic organic chemical mfg . . . . .	2	9	6	334	16 596	191	425	8 880	95 320	72 283	167 885	D
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	1	14	3	179	5 374	141	263	3 451	22 052	18 707	41 222	2 386
32521	Resin & synthetic rubber mfg . . . . .	1	13	3	c	D	D	D	D	D	D	D	D
325211	Plastics material & resin mfg . . . . .	—	7	3	160	4 761	128	243	3 051	19 809	15 056	35 334	D
3253	Pesticide, fertilizer, & other agricultural chemical mfg . . . . .	2	27	8	540	21 265	375	875	12 944	104 165	237 817	330 909	5 434
32531	Fertilizer mfg . . . . .	1	18	7	472	19 275	338	804	12 050	93 691	230 585	312 900	4 648
325312	Phosphatic fertilizer mfg . . . . .	—	2	1	c	D	D	D	D	D	D	D	D
325314	Fertilizer (mixing only) mfg . . . . .	3	13	5	e	D	D	D	D	D	D	D	2 429
3254	Pharmaceutical & medicine mfg . . . . .	1	30	12	1 243	61 928	741	1 810	21 933	143 745	105 030	243 927	22 935
32541	Pharmaceutical & medicine mfg . . . . .	1	30	12	1 243	61 928	741	1 810	21 933	143 745	105 030	243 927	22 935
325412	Pharmaceutical preparation mfg . . . . .	2	8	1	109	5 441	57	105	2 109	18 150	7 422	25 625	2 002
325413	In-vitro diagnostic substance mfg . . . . .	3	6	2	141	6 239	56	67	1 402	20 492	7 162	26 039	D
325414	Biological product (except diagnostic) mfg . . . . .	—	9	7	922	47 673	573	1 572	17 329	99 342	83 768	179 869	D
3255	Paint, coating, & adhesive mfg . . . . .	1	44	15	959	36 529	404	802	12 978	119 168	144 961	266 687	7 050
32551	Paint & coating mfg . . . . .	—	31	12	663	23 062	240	450	7 678	76 045	98 750	177 685	3 467
325510	Paint & coating mfg . . . . .	—	31	12	663	23 062	240	450	7 678	76 045	98 750	177 685	3 467
32552	Adhesive mfg . . . . .	3	13	3	296	13 467	164	352	5 300	43 123	46 211	89 002	3 583
325520	Adhesive mfg . . . . .	3	13	3	296	13 467	164	352	5 300	43 123	46 211	89 002	3 583
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	2	31	6	265	7 894	151	261	3 647	48 821	23 838	72 935	1 121
32561	Soap & cleaning compound mfg . . . . .	1	21	5	215	7 028	115	219	3 147	45 372	21 364	67 004	896
325611	Soap & other detergent mfg . . . . .	1	15	4	151	5 306	73	153	2 256	39 404	14 312	53 784	718
3259	Other chemical product mfg . . . . .	1	39	9	474	18 525	250	512	8 487	103 426	97 768	202 002	4 880
32599	All other chemical product & preparation mfg . . . . .	1	35	6	395	15 254	210	412	6 501	94 943	87 400	182 816	4 559
325998	All other miscellaneous chemical product & preparation mfg . . . . .	1	19	6	321	13 092	160	342	5 298	89 139	80 569	170 093	4 052
326	Plastics & rubber products mfg . . . . .	1	268	120	11 604	322 101	8 799	17 663	210 184	796 329	816 293	1 606 616	111 112
3261	Plastics product mfg . . . . .	1	236	110	10 999	306 629	8 319	16 759	198 788	755 794	790 431	1 539 626	109 321
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	—	16	7	1 303	40 298	1 084	2 290	29 838	98 790	179 748	276 201	13 568
326111	Unsupported plastics bag mfg . . . . .	—	6	3	742	19 826	634	1 247	14 595	44 606	85 190	128 368	7 102
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	—	10	4	561	20 472	450	1 043	15 243	54 184	94 558	147 833	6 466
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	28	11	1 203	34 639	743	1 459	18 500	98 947	109 517	212 265	23 857
326121	Unsupported plastics profile shape mfg . . . . .	—	18	6	889	24 374	507	1 003	11 439	70 740	55 891	126 981	21 274
326122	Plastics pipe & pipe fitting mfg . . . . .	1	10	5	314	10 265	236	456	7 061	28 207	53 626	85 284	2 583
32614	Polystyrene foam product mfg . . . . .	2	10	6	360	10 393	310	673	7 879	34 135	38 695	71 969	1 913
326140	Polystyrene foam product mfg . . . . .	2	10	6	360	10 393	310	673	7 879	34 135	38 695	71 969	1 913

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
326	Plastics & rubber products mfg—Con.												
3261	Plastics product mfg—Con. Urethane & other foam product (except polystyrene) mfg . . . . .	—	9	4	486	17 909	373	859	11 211	41 956	57 357	99 494	13 862
32615													
326150	Urethane & other foam product (except polystyrene) mfg . . . . .	—	9	4	486	17 909	373	859	11 211	41 956	57 357	99 494	13 862
32616	Plastics bottle mfg . . . . .	2	11	9	558	15 926	485	962	12 481	63 780	68 111	129 570	18 612
326160													
32619	Other plastics product mfg . . . . .	2	153	72	7 018	185 526	5 284	10 456	117 975	414 012	333 318	742 254	37 259
326191													
326199	Plastics plumbing fixture mfg . . . . .	1	13	4	334	8 745	274	516	6 541	23 067	16 876	40 117	696
326199	All other plastics product mfg . . . . .	2	140	68	6 684	176 781	5 010	9 940	111 434	390 945	316 442	702 137	36 563
3262	Rubber product mfg . . . . .	4	32	10	605	15 472	480	904	11 396	40 535	25 862	66 990	1 791
32629													
326299	Other rubber product mfg . . . . .	4	24	10	524	13 227	410	768	9 467	34 513	20 312	55 267	1 553
326299	All other rubber product mfg . . . . .	4	18	9	440	11 226	347	659	8 198	31 221	17 683	49 356	1 445
327	Nonmetallic mineral product mfg . . . . .	—	334	101	7 776	259 024	6 122	12 306	185 414	726 850	611 020	1 347 073	65 717
3271	Clay product & refractory mfg . . . . .	4	48	8	574	13 545	455	853	8 987	29 485	19 909	49 952	4 385
32711													
327112	Pottery, ceramics, & plumbing fixture mfg . . . . .	4	35	3	224	4 457	180	288	2 833	9 346	3 570	13 154	1 653
327112	Vitreous china, fine earthenware, & other pottery product mfg . . . . .	2	34	2	c	D	D	D	D	D	D	D	D
32712	Clay building material & refractories mfg . . . . .	4	13	5	350	9 088	275	565	6 154	20 139	16 339	36 798	2 732
327121													
327121	Brick & structural clay tile mfg . . . . .	9	3	3	c	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	—	74	17	2 442	71 764	1 972	3 890	54 064	211 124	140 468	359 077	30 581
32721													
327211	Glass & glass product mfg . . . . .	—	74	17	2 442	71 764	1 972	3 890	54 064	211 124	140 468	359 077	30 581
327212	Flat glass mfg . . . . .	—	1	1	c	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	1	22	3	c	D	D	D	D	D	D	D	D
327213	Glass container mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
327215													
327215	Glass product mfg made of purchased glass . . . . .	—	50	12	1 443	37 192	1 122	2 199	25 939	77 224	81 943	158 744	3 349
3273	Cement & concrete product mfg . . . . .	—	176	68	4 051	147 318	3 198	6 568	105 760	389 100	353 291	743 566	26 403
32731													
327310	Cement mfg . . . . .	—	8	3	239	9 704	178	354	6 481	39 636	50 999	93 273	4 308
327310	Cement mfg . . . . .	—	8	3	239	9 704	178	354	6 481	39 636	50 999	93 273	4 308
32732	Ready-mix concrete mfg . . . . .	—	89	37	2 121	81 814	1 779	3 725	64 521	214 472	195 494	410 687	13 179
327320													
327320	Ready-mix concrete mfg . . . . .	—	89	37	2 121	81 814	1 779	3 725	64 521	214 472	195 494	410 687	13 179
32733	Concrete pipe, brick, & block mfg . . . . .	4	24	8	347	11 477	252	479	6 447	27 378	21 187	47 449	1 790
327331													
327331	Concrete block & brick mfg . . . . .	5	17	6	213	7 505	158	325	4 614	19 289	15 361	33 567	949
327332	Concrete pipe mfg . . . . .	1	7	2	134	3 972	94	154	1 833	8 089	5 826	13 882	841
32739	Other concrete product mfg . . . . .	1	55	20	1 344	44 323	989	2 010	28 311	107 614	85 611	192 157	7 126
327390													
327390	Other concrete product mfg . . . . .	1	55	20	1 344	44 323	989	2 010	28 311	107 614	85 611	192 157	7 126
3274	Lime & gypsum product mfg . . . . .	—	4	4	e	D	D	D	D	D	D	D	2 317
32742													
327420	Gypsum product mfg . . . . .	—	3	3	299	14 041	215	429	8 545	64 604	67 437	131 803	D
327420	Gypsum product mfg . . . . .	—	3	3	299	14 041	215	429	8 545	64 604	67 437	131 803	D
3279	Other nonmetallic mineral product mfg . . . . .	3	32	4	e	D	D	D	D	D	D	D	2 031
32791													
327910	Abrasive product mfg . . . . .	1	5	2	c	D	D	D	D	D	D	D	D
327910	Abrasive product mfg . . . . .	1	5	2	c	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg . . . . .	5	27	2	c	D	D	D	D	D	D	D	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg . . . . .	-	87	55	12 125	502 063	9 774	20 551	358 343	1 450 616	2 174 528	3 651 986	162 121
3311	Iron & steel mills & ferroalloy mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	-	3	1	c	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel . . . . .	-	3	1	c	D	D	D	D	D	D	D	D
331222	Steel wire drawing . . . . .	-	2	1	c	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing . . . . .	-	12	12	6 831	315 891	5 588	11 845	230 764	728 116	1 670 745	2 417 357	104 880
33131	Alumina & aluminum production & processing . . . . .	-	12	12	6 831	315 891	5 588	11 845	230 764	728 116	1 670 745	2 417 357	104 880
331312	Primary aluminum production . . . . .	-	6	6	h	D	D	D	D	D	D	D	D
331315	Aluminum sheet, plate, & foil mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
331319	Other aluminum rolling & drawing . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	-	18	9	1 958	73 706	1 458	2 995	49 412	402 846	246 114	653 979	34 874
33141	Nonferrous metal (except aluminum) smelting & refining . . . . .	-	5	4	869	35 273	607	1 309	24 394	136 563	118 788	254 757	23 429
331419	Other nonferrous metal primary smelting & refining . . . . .	-	5	4	869	35 273	607	1 309	24 394	136 563	118 788	254 757	23 429
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	-	13	5	1 089	38 433	851	1 686	25 018	266 283	127 326	399 222	11 445
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	-	7	4	1 025	35 697	803	1 598	23 693	260 896	120 204	386 670	10 720
3315	Foundries . . . . .	-	52	31	2 711	82 163	2 255	4 618	57 656	189 907	102 466	292 627	15 150
33151	Ferrous metal foundries . . . . .	-	23	20	1 370	43 266	1 136	2 392	31 993	99 409	52 345	152 108	6 887
331511	Iron foundries . . . . .	1	7	7	f	D	D	D	D	D	D	D	4 081
331513	Steel foundries (except investment) . . . . .	-	13	10	773	26 524	665	1 415	20 204	62 343	33 044	95 921	D
33152	Nonferrous metal foundries . . . . .	-	29	11	1 341	38 897	1 119	2 226	25 663	90 498	50 121	140 519	8 263
331524	Aluminum foundries (except die-casting) . . . . .	-	12	7	1 095	30 212	926	1 848	20 421	75 274	42 054	117 391	6 875
332	Fabricated metal product mfg . . . . .	1	1 184	269	22 037	706 731	16 710	31 441	460 221	1 544 085	1 212 399	2 721 826	105 652
3321	Forging & stamping . . . . .	1	33	14	976	30 283	776	1 477	20 319	59 117	56 549	114 895	3 628
33211	Forging & stamping . . . . .	1	33	14	976	30 283	776	1 477	20 319	59 117	56 549	114 895	3 628
332111	Iron & steel forging . . . . .	9	10	2	c	D	D	D	D	D	D	D	D
332114	Custom roll forming . . . . .	-	9	4	306	9 488	252	516	6 960	16 486	22 212	38 218	690
332116	Metal stamping . . . . .	-	12	7	527	16 463	410	771	10 337	33 832	27 314	60 826	2 246
3322	Cutlery & handtool mfg . . . . .	5	33	4	461	12 641	386	781	9 353	27 024	16 057	43 007	1 523
33221	Cutlery & handtool mfg . . . . .	5	33	4	461	12 641	386	781	9 353	27 024	16 057	43 007	1 523
332212	Hand & edge tool mfg . . . . .	2	26	3	314	8 119	269	540	6 204	15 374	8 894	24 232	748
332213	Saw blade & handsaw mfg . . . . .	9	2	1	c	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	1	308	97	7 026	217 324	5 250	10 074	140 725	439 242	471 762	909 670	23 131
33231	Plate work & fabricated structural product mfg . . . . .	1	117	33	2 059	65 946	1 484	2 763	40 852	134 714	133 555	268 534	5 066
332311	Prefabricated metal building & component mfg . . . . .	-	9	4	294	9 996	172	373	5 028	19 183	20 989	40 243	725
332312	Fabricated structural metal mfg . . . . .	1	88	24	1 527	48 573	1 127	2 092	30 947	102 793	104 317	207 383	3 966
332313	Plate work mfg . . . . .	3	20	5	238	7 377	185	298	4 877	12 738	8 249	20 908	375
33232	Ornamental & architectural metal products mfg . . . . .	1	191	64	4 967	151 378	3 766	7 311	99 873	304 528	338 207	641 136	18 065
332321	Metal window & door mfg . . . . .	1	28	11	1 269	35 900	953	1 962	22 736	72 180	102 611	175 373	1 870
332322	Sheet metal work mfg . . . . .	-	113	44	2 938	89 051	2 246	4 231	57 855	193 167	180 555	371 671	11 100
332323	Ornamental & architectural metal work mfg . . . . .	1	50	9	760	26 427	567	1 118	19 282	39 181	55 041	94 092	5 095

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WASHINGTON—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3324	Boiler, tank, & shipping container mfg .....	—	34	19	1 368	53 013	1 073	2 178	40 548	156 772	260 770	403 280	5 423
33241	Power boiler & heat exchanger mfg .....	1	8	3	138	4 594	109	209	2 734	7 813	6 938	14 788	344
332410	Power boiler & heat exchanger mfg .....	1	8	3	138	4 594	109	209	2 734	7 813	6 938	14 788	344
33242	Metal tank (heavy gauge) mfg .....	—	12	6	243	8 349	153	293	4 855	13 824	13 377	26 770	1 238
332420	Metal tank (heavy gauge) mfg .....	—	12	6	243	8 349	153	293	4 855	13 824	13 377	26 770	1 238
33243	Metal can, box, & other metal container (light gauge) mfg .....	—	14	10	987	40 070	811	1 676	32 959	135 135	240 455	361 722	3 841
332431	Metal can mfg .....	—	7	7	871	35 730	729	1 484	30 695	127 319	234 141	347 094	3 403
332439	Other metal container mfg .....	—	7	3	116	4 340	82	192	2 264	7 816	6 314	14 628	438
3325	Hardware mfg .....	1	22	6	362	10 394	271	501	6 325	32 062	18 199	49 544	1 858
33251	Hardware mfg .....	1	22	6	362	10 394	271	501	6 325	32 062	18 199	49 544	1 858
332510	Hardware mfg .....	1	22	6	362	10 394	271	501	6 325	32 062	18 199	49 544	1 858
3326	Spring & wire product mfg .	2	23	6	384	12 691	284	524	7 654	25 167	14 861	39 199	3 058
33261	Spring & wire product mfg .....	2	23	6	384	12 691	284	524	7 654	25 167	14 861	39 199	3 058
332618	Other fabricated wire product mfg .....	3	19	4	278	8 870	202	380	5 198	18 210	11 058	29 000	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	523	68	6 660	214 964	5 296	9 371	146 500	449 076	194 856	629 679	47 273
33271	Machine shops .....	1	484	58	5 848	182 873	4 629	8 022	123 466	387 930	159 339	533 771	39 184
332710	Machine shops .....	1	484	58	5 848	182 873	4 629	8 022	123 466	387 930	159 339	533 771	39 184
33272	Turned product & screw, nut, & bolt mfg .....	—	39	10	812	32 091	667	1 349	23 034	61 146	35 517	95 908	8 089
332721	Precision turned product mfg .....	—	35	9	717	28 739	589	1 186	20 448	53 936	32 051	85 399	6 592
3328	Coating, engraving, heat treating, & allied activities.	1	81	25	2 304	66 085	1 853	3 696	42 721	142 231	44 220	184 496	10 255
33281	Coating, engraving, heat treating, & allied activities .....	1	81	25	2 304	66 085	1 853	3 696	42 721	142 231	44 220	184 496	10 255
332811	Metal heat treating .....	—	8	2	121	3 771	108	199	2 953	8 629	3 567	12 165	1 021
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	1	33	11	867	24 089	751	1 561	17 729	54 572	14 882	68 721	4 331
332813	Electroplating, plating, polishing, anodizing, & coloring .....	—	40	12	1 316	38 225	994	1 936	22 039	79 030	25 771	103 610	4 903
3329	Other fabricated metal product mfg .....	1	127	30	2 496	89 336	1 521	2 839	46 076	213 394	135 125	348 056	9 503
33291	Metal valve mfg .....	—	14	5	585	23 357	301	574	13 614	48 031	34 670	82 406	2 446
332912	Fluid power valve & hose fitting mfg .....	—	3	1	e	D	D	D	D	D	D	D	D
332919	Other metal valve & pipe fitting mfg .....	—	3	2	c	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	1	113	25	1 911	65 979	1 220	2 265	32 462	165 363	100 455	265 650	7 057
332993	Ammunition (except small arms) mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
332996	Fabricated pipe & pipe fitting mfg .....	1	16	7	322	10 166	208	416	5 615	26 670	26 838	52 320	2 134
332999	All other miscellaneous fabricated metal product mfg .....	2	75	16	1 050	31 049	847	1 549	22 297	67 298	47 288	114 418	3 751
333	Machinery mfg .....	1	503	131	13 655	475 540	8 994	16 976	260 694	1 059 118	967 888	2 025 631	58 652
3331	Agriculture, construction, & mining machinery mfg ....	2	72	21	1 341	47 277	872	1 737	25 074	101 695	139 778	238 819	7 393
33311	Agricultural implement mfg .....	1	38	6	426	11 342	316	608	7 943	29 135	31 934	60 733	3 371
333111	Farm machinery & equipment mfg .....	1	35	6	418	11 149	309	595	7 805	28 496	30 968	59 111	3 340
33312	Construction machinery mfg .....	1	28	14	797	31 961	469	948	14 415	60 955	96 587	155 296	3 547
333120	Construction machinery mfg .....	1	28	14	797	31 961	469	948	14 415	60 955	96 587	155 296	3 547
33313	Mining & oil & gas field machinery mfg .....	9	6	1	118	3 974	87	181	2 716	11 605	11 257	22 790	475
333131	Mining machinery & equipment mfg .....	9	5	1	c	D	D	D	D	D	D	D	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WASHINGTON—Con.</b>												
	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3332	Industrial machinery mfg ..	2	98	21	2 802	104 356	1 599	2 972	51 295	204 957	171 133	376 656	8 242
33321	Sawmill & woodworking machinery mfg .....	—	20	3	f	D	D	D	D	D	D	D	D
333210	Sawmill & woodworking machinery mfg .....	—	20	3	f	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg .....	9	8	1	e	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg .....	9	8	1	e	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg .....	1	70	17	1 794	72 145	1 026	1 968	35 279	128 875	118 908	245 699	5 922
333291	Paper industry machinery mfg .....	—	11	4	291	11 401	143	298	5 143	24 669	16 161	40 710	846
333294	Food product machinery mfg .....	2	27	7	604	22 173	373	727	11 359	41 312	32 477	68 754	1 776
333298	All other industrial machinery mfg .....	—	27	4	811	35 154	459	831	16 778	52 599	65 687	120 383	3 045
3333	Commercial & service industry machinery mfg ..	1	53	17	1 490	51 228	915	1 840	24 130	110 314	64 094	178 234	4 640
33331	Commercial & service industry machinery mfg .....	1	53	17	1 490	51 228	915	1 840	24 130	110 314	64 094	178 234	4 640
333314	Optical instrument & lens mfg .....	1	7	3	377	14 857	231	494	6 950	25 056	10 158	37 556	1 553
333315	Photographic & photocopying equipment mfg .....	2	12	3	226	5 781	116	226	2 129	7 507	8 987	18 603	801
333319	Other commercial & service industry machinery mfg .....	1	29	9	758	26 230	492	924	12 584	67 668	34 489	101 841	1 964
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	2	34	14	1 439	41 083	1 021	1 719	21 299	128 633	78 612	206 405	6 488
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	2	34	14	1 439	41 083	1 021	1 719	21 299	128 633	78 612	206 405	6 488
333414	Heating equipment (except warm air furnaces) mfg .....	2	18	9	1 132	30 466	814	1 327	16 288	98 406	48 861	145 792	5 605
333415	AC & warm air heating & commercial/ industrial refrig equip mfg .....	—	10	3	190	5 903	145	276	3 433	17 629	14 892	32 568	643
3335	Metalworking machinery mfg .....	—	87	16	1 667	62 458	1 093	1 965	34 921	136 686	96 643	228 697	11 237
33351	Metalworking machinery mfg .....	—	87	16	1 667	62 458	1 093	1 965	34 921	136 686	96 643	228 697	11 237
333511	Industrial mold mfg ...	—	29	6	376	14 148	300	513	10 184	22 525	9 353	32 352	3 677
333512	Machine tool (metal cutting types) mfg ...	—	5	3	546	21 379	251	408	6 366	66 601	61 093	121 705	4 866
333513	Machine tool (metal forming types) mfg ...	—	1	1	e	D	D	D	D	D	D	D	D
333514	Special die & tool, die set, jig, & fixture mfg .	3	27	5	270	9 198	226	396	6 707	16 168	5 128	21 339	1 357
333515	Cutting tool & machine tool accessory mfg ..	7	20	—	116	3 378	73	126	2 110	6 488	2 825	9 297	D
3336	Engine, turbine, & power transmission equipment mfg .....	1	9	2	180	6 889	133	257	4 271	14 583	8 512	23 314	1 201
33361	Engine, turbine, & power transmission equipment mfg .....	1	9	2	180	6 889	133	257	4 271	14 583	8 512	23 314	1 201
333612	Speed changer, industrial high-speed drive, & gear mfg ....	—	1	1	c	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	1	150	40	4 736	162 249	3 361	6 486	99 704	362 250	409 116	773 506	19 451
33391	Pump & compressor mfg .....	1	16	4	351	13 086	135	245	3 555	35 843	18 355	54 276	2 158
333911	Pump & pumping equipment mfg .....	—	3	2	e	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg .....	—	47	18	2 961	98 013	2 298	4 573	68 863	219 811	326 923	546 764	10 702
333922	Conveyor & conveying equipment mfg .....	—	17	9	1 196	48 892	946	1 898	35 813	74 882	85 226	160 672	3 382
333923	Overhead traveling crane, hoist, & monorail system mfg .	—	13	6	1 444	37 838	1 153	2 304	27 833	129 720	218 011	346 921	6 586
333924	Industrial truck, tractor, trailer, & stacker machinery mfg .....	—	13	3	294	10 413	180	332	4 609	12 446	21 526	34 131	693

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WASHINGTON—Con. Manufacturing— Con.</b>												
333	Machinery mfg—Con.												
3339	Other general-purpose machinery mfg—Con.												
33399	All other general-purpose machinery mfg .....	2	87	18	1 424	51 150	928	1 668	27 286	106 596	63 838	172 466	6 591
333993	Packaging machinery mfg .....	2	23	9	631	21 326	415	727	11 930	44 029	29 966	74 281	1 373
333995	Fluid power cylinder & actuator mfg .....	—	10	2	214	9 798	176	346	6 118	18 481	7 105	25 909	D
333997	Scale & balance (except laboratory) mfg .....	—	5	3	220	7 708	97	176	2 776	18 348	7 504	26 867	221
333999	All other miscellaneous general-purpose machinery mfg .....	4	35	3	253	8 892	170	292	4 531	17 392	12 382	29 808	1 171
334	Computer & electronic product mfg.....	—	438	163	46 235	2 204 559	21 128	40 810	701 316	4 663 158	2 835 134	7 479 752	701 759
3341	Computer & peripheral equipment mfg .....	1	51	19	7 162	324 977	4 419	8 517	185 490	751 059	582 188	1 304 395	77 419
33411	Computer & peripheral equipment mfg .....	1	51	19	7 162	324 977	4 419	8 517	185 490	751 059	582 188	1 304 395	77 419
334111	Electronic computer mfg .....	4	8	5	f	D	D	D	D	D	D	D	D
334112	Computer storage device mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	—	39	10	5 955	271 640	4 000	7 688	177 180	645 006	426 740	1 048 254	66 812
3342	Communications equipment mfg .....	2	62	24	3 172	132 389	1 328	1 992	28 096	319 050	252 562	574 574	17 608
33421	Telephone apparatus mfg .....	3	18	10	1 769	85 324	697	1 005	15 651	222 343	149 112	368 109	12 984
334210	Telephone apparatus mfg .....	3	18	10	1 769	85 324	697	1 005	15 651	222 343	149 112	368 109	12 984
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	1	30	11	1 194	41 093	572	887	11 213	84 159	94 367	184 847	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	1	30	11	1 194	41 093	572	887	11 213	84 159	94 367	184 847	D
33429	Other communications equipment mfg .....	2	14	3	209	5 972	59	100	1 232	12 548	9 083	21 618	D
334290	Other communications equipment mfg .....	2	14	3	209	5 972	59	100	1 232	12 548	9 083	21 618	D
3343	Audio & video equipment mfg .....	3	18	6	1 097	31 012	794	1 653	16 759	63 574	205 412	270 861	2 985
33431	Audio & video equipment mfg .....	3	18	6	1 097	31 012	794	1 653	16 759	63 574	205 412	270 861	2 985
334310	Audio & video equipment mfg .....	3	18	6	1 097	31 012	794	1 653	16 759	63 574	205 412	270 861	2 985
3344	Semiconductor & other electronic component mfg .....	—	116	53	8 477	288 424	6 189	12 816	167 064	747 801	598 719	1 342 379	408 468
33441	Semiconductor & other electronic component mfg .....	—	116	53	8 477	288 424	6 189	12 816	167 064	747 801	598 719	1 342 379	408 468
334412	Bare printed circuit board mfg .....	1	25	12	1 640	48 990	1 322	2 929	34 167	117 263	63 555	182 167	6 261
334413	Semiconductor & related device mfg ...	—	21	9	3 104	127 345	2 334	4 885	81 334	350 348	358 297	703 183	363 492
334414	Electronic capacitor mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg .....	2	7	4	e	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg .....	3	12	11	864	20 767	679	1 286	11 968	43 998	43 630	89 367	2 944
334419	Other electronic component mfg .....	1	46	14	1 674	63 460	815	1 600	18 680	135 861	96 021	230 494	27 487
3345	Navigational, measuring, medical, & control instruments mfg .....	—	164	53	25 692	1 404 931	7 985	15 034	293 248	2 716 724	1 152 297	3 877 928	183 795
33451	Navigational, measuring, medical, & control instruments mfg .....	—	164	53	25 692	1 404 931	7 985	15 034	293 248	2 716 724	1 152 297	3 877 928	183 795
334510	Electromedical & electrotherapeutic apparatus mfg .....	—	19	11	4 475	239 450	1 477	3 084	42 764	549 160	419 776	933 332	49 283
334511	Search, detection, navigation, & guidance instrument mfg .....	—	27	12	15 736	914 908	4 310	7 646	170 885	1 496 388	385 412	1 937 339	D
334513	Industrial process control instrument mfg .....	1	20	5	229	9 444	117	221	4 298	21 572	8 203	29 525	D

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WASHINGTON—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg—Con.												
3345	Navigational, measuring, medical, & control instruments mfg—Con.												
33451	Navigational, measuring, medical, & control instruments mfg—Con.												
334515	Electricity measuring & testing instrument mfg . . . . .	—	29	10	3 937	181 019	1 315	2 674	49 041	550 833	285 886	825 377	36 708
334516	Analytical laboratory instrument mfg . . . . .	1	19	5	403	17 513	139	257	4 804	24 106	11 964	36 453	D
334519	Other measuring & controlling device mfg . . . . .	1	32	9	789	39 310	535	983	19 387	66 108	35 858	101 981	2 457
3346	Mfg & reproducing magnetic & optical media . . . . .	3	27	8	635	22 826	413	798	10 659	64 950	43 956	109 615	11 484
33461	Mfg & reproducing magnetic & optical media . . . . .	3	27	8	635	22 826	413	798	10 659	64 950	43 956	109 615	11 484
334611	Software reproducing . . . . .	—	5	2	c	D	D	D	D	D	D	D	D
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	1	13	2	c	D	D	D	D	D	D	D	5 789
334613	Magnetic & optical recording media mfg . . . . .	8	9	4	198	6 263	130	246	3 464	15 566	16 515	32 580	D
335	Electrical equipment, appliance, & component mfg . . . . .	2	116	36	3 639	114 981	2 202	4 116	49 084	343 225	247 660	590 667	19 187
3351	Electric lighting equipment mfg . . . . .	1	18	3	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg . . . . .	1	18	3	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg . . . . .	—	5	1	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg . . . . .	—	4	2	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D
33522	Major appliance mfg . . . . .	—	1	1	c	D	D	D	D	D	D	D	D
335221	Household cooking appliance mfg . . . . .	—	1	1	c	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg . . . . .	4	61	20	1 214	40 476	669	1 319	16 157	101 800	85 912	185 212	5 866
33531	Electrical equipment mfg . . . . .	4	61	20	1 214	40 476	669	1 319	16 157	101 800	85 912	185 212	5 866
335312	Motor & generator mfg . . . . .	9	8	5	c	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg . . . . .	4	16	3	254	8 252	164	332	4 330	17 972	20 643	37 365	1 692
335314	Relay & industrial control mfg . . . . .	2	35	12	765	25 693	364	694	7 744	67 103	50 748	116 541	3 455
3359	Other electrical equipment & component mfg . . . . .	2	33	11	1 161	34 358	743	1 222	15 165	105 949	87 238	196 535	5 228
33593	Wiring device mfg . . . . .	—	7	2	c	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg . . . . .	—	2	1	c	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg . . . . .	4	20	7	843	22 490	576	924	10 995	66 281	44 985	112 040	2 836
335999	All other miscellaneous electrical equipment & component mfg . . . . .	4	20	7	843	22 490	576	924	10 995	66 281	44 985	112 040	2 836
336	Transportation equipment mfg . . . . .	3	462	153	88 612	4 648 536	46 780	99 391	2 330 730	8 237 079	21 476 827	29 222 900	318 390
3361	Motor vehicle mfg . . . . .	—	7	1	g	D	D	D	D	D	D	D	1 732
33612	Heavy duty truck mfg . . . . .	—	2	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg . . . . .	—	2	1	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg . . . . .	1	40	13	g	D	D	D	D	D	D	D	2 257
33621	Motor vehicle body & trailer mfg . . . . .	1	40	13	g	D	D	D	D	D	D	D	2 257
336211	Motor vehicle body mfg . . . . .	2	15	6	e	D	D	D	D	D	D	D	D
336212	Truck trailer mfg . . . . .	—	7	4	e	D	D	D	D	D	D	D	879
336214	Travel trailer & camper mfg . . . . .	—	17	3	f	D	D	D	D	D	D	D	784

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NAICS code	Geographic area and industry	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)		
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)					Wages (\$1,000)	
<b>31-33</b>	<b>WASHINGTON—Con.</b>													
	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg—Con.													
3363	Motor vehicle parts mfg ...	4	91	28	h	D	D	D	D	D	D	17 978		
33631	Motor vehicle gasoline engine & engine parts mfg .....	2	30	8	f	D	D	D	D	D	D	2 359		
336312	Gasoline engine & engine parts mfg .....	2	30	8	f	D	D	D	D	D	D	2 359		
33632	Motor vehicle electrical & electronic equipment mfg .....	7	23	8	f	D	D	D	D	D	D	2 155		
336322	Other motor vehicle electrical & electronic equipment mfg .....	7	22	8	f	D	D	D	D	D	D	D		
33639	Other motor vehicle parts mfg .....	5	20	8	g	D	D	D	D	D	D	10 654		
336391	Motor vehicle air-conditioning mfg .....	—	1	1	e	D	D	D	D	D	D	D		
336399	All other motor vehicle parts mfg .....	7	19	7	f	D	D	D	D	D	D	D		
3364	Aerospace product & parts mfg .....	3	139	56	l	D	D	D	D	D	D	271 132		
33641	Aerospace product & parts mfg .....	3	139	56	l	D	D	D	D	D	D	271 132		
336411	Aircraft mfg .....	3	8	5	l	D	D	D	D	D	D	D		
336412	Aircraft engine & engine parts mfg .....	—	9	3	c	D	D	D	D	D	D	243		
336413	Other aircraft part & auxiliary equipment mfg .....	—	118	46								D		
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D		
3365	Railroad rolling stock mfg ..	1	5	2		6 776	148	332	4 902	10 696	9 745	21 290	437	
33651	Railroad rolling stock mfg .....	1	5	2		6 776	148	332	4 902	10 696	9 745	21 290	437	
336510	Railroad rolling stock mfg .....	1	5	2		6 776	148	332	4 902	10 696	9 745	21 290	437	
3366	Ship & boat building .....	1	152	48		6 129	214 028	4 629	8 930	133 333	322 200	230 964	558 436	23 246
33661	Ship & boat building .....	1	152	48		6 129	214 028	4 629	8 930	133 333	322 200	230 964	558 436	23 246
336611	Ship building & repairing .....	1	62	25		3 597	137 733	2 649	5 689	92 692	235 438	132 257	367 695	5 827
336612	Boat building .....	1	90	23		2 532	76 295	1 980	3 241	40 641	86 762	98 707	190 741	17 419
3369	Other transportation equipment mfg .....	1	28	5	f	D	D	D	D	D	D	D	1 608	
33699	Other transportation equipment mfg .....	1	28	5	f	D	D	D	D	D	D	D	1 608	
336991	Motorcycle, bicycle, & parts mfg .....	1	22	4	e	D	D	D	D	D	D	D	1 450	
337	Furniture & related product mfg .....	1	474	90		7 351	188 121	5 846	11 156	125 077	380 677	291 172	675 292	17 221
3371	Household & institutional furniture & kitchen cabinet mfg .....	2	348	48		4 374	102 995	3 536	6 639	70 871	195 456	151 233	345 962	7 781
33711	Wood kitchen cabinet & counter top mfg .....	1	216	28		2 805	67 370	2 236	4 360	45 227	125 841	89 932	215 581	4 549
337110	Wood kitchen cabinet & counter top mfg ...	1	216	28		2 805	67 370	2 236	4 360	45 227	125 841	89 932	215 581	4 549
33712	Household & institutional furniture mfg .....	2	132	20		1 569	35 625	1 300	2 279	25 644	69 615	61 301	130 381	3 232
337121	Upholstered household furniture mfg .....	2	18	1		110	2 503	98	177	1 928	4 474	5 465	9 920	236
337122	Nonupholstered wood household furniture mfg .....	3	72	8		587	11 406	526	876	8 793	21 552	21 422	42 932	1 414
337127	Institutional furniture mfg .....	1	30	8		744	19 703	576	1 053	13 485	38 764	30 834	69 177	1 400
3372	Office furniture (including fixtures) mfg .....	1	104	36		2 361	68 863	1 854	3 647	43 313	126 414	88 183	218 620	6 744
33721	Office furniture (including fixtures) mfg .....	1	104	36		2 361	68 863	1 854	3 647	43 313	126 414	88 183	218 620	6 744
337211	Wood office furniture mfg .....	—	28	11		945	21 516	800	1 496	15 024	46 078	26 451	72 992	2 654
337212	Custom architectural woodwork & millwork mfg .....	—	29	12		496	17 050	386	758	10 176	28 888	16 444	45 324	1 064
337214	Office furniture (except wood) mfg .....	1	7	3		267	8 897	183	412	4 611	20 541	16 165	36 784	1 428
337215	Showcase, partition, shelving, & locker mfg .....	2	40	10		653	21 400	485	981	13 502	30 907	29 123	63 520	1 598
3379	Other furniture related product mfg .....	1	22	6		616	16 263	456	870	10 893	58 807	51 756	110 710	2 696
33791	Mattress mfg .....	1	18	6		579	15 647	429	829	10 486	57 432	50 077	107 584	2 638
337910	Mattress mfg .....	1	18	6		579	15 647	429	829	10 486	57 432	50 077	107 584	2 638

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WASHINGTON—Con.</b>												
	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	2	851	112	10 382	292 596	7 154	12 794	154 401	731 511	476 772	1 201 607	45 977
3391	Medical equipment & supplies mfg.....	3	372	39	3 289	112 659	2 134	3 577	52 445	264 750	135 593	401 962	16 432
33911	Medical equipment & supplies mfg.....	3	372	39	3 289	112 659	2 134	3 577	52 445	264 750	135 593	401 962	16 432
339112	Surgical & medical instrument mfg.....	2	33	10	971	45 668	493	883	16 436	114 381	60 342	174 490	9 428
339113	Surgical appliance & supplies mfg.....	3	32	12	737	22 437	479	801	10 067	56 377	29 799	86 423	3 238
339114	Dental equipment & supplies mfg.....	1	25	4	263	8 814	178	320	4 042	16 516	13 251	29 762	D
339115	Ophthalmic goods mfg.....	5	10	3	c	D	D	D	D	D	D	D	D
339116	Dental laboratories ...	6	268	9	1 152	31 227	874	1 361	19 441	66 257	25 091	92 960	2 359
3399	Other miscellaneous mfg ..	2	479	73	7 093	179 937	5 020	9 217	101 956	466 761	341 179	799 645	29 545
33991	Jewelry & silverware mfg.....	4	67	5	358	8 352	260	431	4 741	17 565	14 141	31 307	268
339911	Jewelry (except costume) mfg.....	4	47	3	264	6 755	190	322	3 706	13 219	12 027	24 894	203
33992	Sporting & athletic goods mfg.....	1	103	27	3 422	87 916	2 495	4 783	50 958	275 288	217 618	483 305	19 634
339920	Sporting & athletic goods mfg.....	1	103	27	3 422	87 916	2 495	4 783	50 958	275 288	217 618	483 305	19 634
33993	Doll, toy, & game mfg ...	4	25	3	240	6 454	159	267	3 357	17 250	12 180	29 362	1 569
339932	Game, toy, & children's vehicle mfg.....	4	20	2	180	5 366	122	202	2 727	15 052	11 343	26 381	1 561
33994	Office supplies (except paper) mfg.....	4	29	7	624	14 167	465	801	8 806	24 838	16 985	45 516	1 320
339943	Marking device mfg ...	1	22	5	337	7 119	231	376	4 076	16 247	8 810	25 095	762
339944	Carbon paper & inked ribbon mfg.....	9	1	1	c	D	D	D	D	D	D	D	D
33995	Sign mfg.....	3	150	13	1 366	37 455	829	1 473	18 605	72 935	41 007	114 171	3 098
339950	Sign mfg.....	3	150	13	1 366	37 455	829	1 473	18 605	72 935	41 007	114 171	3 098
33999	All other miscellaneous mfg.....	3	105	18	1 083	25 593	812	1 462	15 489	58 885	39 248	95 984	3 656
339991	Gasket, packing, & sealing device mfg ...	2	9	1	104	4 099	72	140	1 743	6 720	3 253	9 994	463
339992	Musical instrument mfg.....	2	17	4	244	5 753	191	383	4 215	13 529	6 976	20 650	541
339999	All other miscellaneous mfg.....	4	69	13	664	13 816	496	840	8 378	32 267	25 678	55 628	2 434

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Industries with 100 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c—100 to 249 employees; e—250 to 499 employees; f—500 to 999 employees; g—1,000 to 2,499 employees, h—2,500 to 4,999 employees; i—5,000 to 9,999 employees; j—10,000 to 24,999 employees; k—25,000 to 49,999 employees; l—50,000 to 99,999 employees; m—100,000 employees or more.

**Table 2. Industry Statistics for Metropolitan Areas: 1997**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>BELLINGHAM, WA MSA</b>												
	<b>Manufacturing . . . .</b>	-	<b>314</b>	<b>84</b>	<b>9 184</b>	<b>281 360</b>	<b>6 856</b>	<b>12 975</b>	<b>183 074</b>	<b>841 770</b>	<b>3 090 001</b>	<b>3 946 981</b>	<b>86 393</b>
311	Food mfg . . . . .	-	42	19	1 372	31 740	1 107	1 877	22 200	162 162	292 567	465 837	5 544
3117	Seafood product preparation & packaging . .	-	15	9	815	15 744	727	1 211	12 546	45 521	105 226	150 775	2 046
31171	Seafood product preparation & packaging . . . . .	-	15	9	815	15 744	727	1 211	12 546	45 521	105 226	150 775	2 046
311712	Fresh & frozen seafood processing . .	-	14	9	f	D	D	D	D	D	D	D	D
314	Textile product mills . . . . .	-	20	4	e	D	D	D	D	D	D	D	436
3149	Other textile product mills . .	-	17	4	e	D	D	D	D	D	D	D	D
31499	All other textile product mills . . . . .	-	10	4	e	D	D	D	D	D	D	D	380
321	Wood product mfg . . . . .	1	28	11	1 014	25 476	861	1 654	18 980	59 082	132 270	182 993	3 321
3211	Sawmills & wood preservation . . . . .	-	9	4	269	8 027	208	407	5 169	22 587	52 028	68 751	1 753
32111	Sawmills & wood preservation . . . . .	-	9	4	269	8 027	208	407	5 169	22 587	52 028	68 751	1 753
3212	Veneer, plywood, & engineered wood product mfg . . . . .	-	4	2	e	D	D	D	D	D	D	D	300
32121	Veneer, plywood, & engineered wood product mfg . . . . .	-	4	2	e	D	D	D	D	D	D	D	300
3219	Other wood product mfg . . . .	2	15	5	e	D	D	D	D	D	D	D	1 268
32191	Millwork . . . . .	2	7	4	367	8 922	325	623	7 168	21 856	48 164	69 301	1 075
322	Paper mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	2	18	3	343	4 146	134	203	2 850	5 779	4 113	9 865	669
3231	Printing & related support activities . . . . .	2	18	3	343	4 146	134	203	2 850	5 779	4 113	9 865	669
32311	Printing . . . . .	2	15	3	327	3 769	119	178	2 558	4 935	3 922	8 829	633
324	Petroleum & coal products mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	7	11	4	380	11 760	273	604	7 026	23 423	16 368	39 572	1 758
3261	Plastics product mfg . . . . .	7	9	4	e	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	7	7	4	e	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	9	6	3	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	17	5	295	9 663	238	486	7 086	21 610	23 677	45 162	1 487
3273	Cement & concrete product mfg . . . . .	-	8	5	253	8 855	214	440	6 496	19 313	22 096	41 264	D
331	Primary metal mfg . . . . .	-	4	1	g	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing . .	-	1	1	g	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
331312	Primary aluminum production . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	3	35	4	324	8 082	259	409	5 666	17 545	13 801	31 573	1 778
333	Machinery mfg . . . . .	-	23	5	303	9 791	214	369	6 140	24 436	16 796	40 600	834
335	Electrical equipment, appliance, & component mfg . . . . .	9	4	1	e	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg . . . . .	9	4	1	e	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg . . . . .	9	3	1	e	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg . . . . .	9	3	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	30	8	f	D	D	D	D	D	D	D	1 932
3366	Ship & boat building . . . . .	-	19	5	e	D	D	D	D	D	D	D	222
33661	Ship & boat building . . . . .	-	19	5	e	D	D	D	D	D	D	D	222

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>BELLINGHAM, WA MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	5	32	7	516	12 197	383	645	7 341	21 738	16 483	42 070	738
3399	Other miscellaneous mfg ..	9	13	3	338	7 554	267	446	4 894	9 319	8 937	21 813	617
<b>31-33</b>	<b>PORTLAND–SALEM, OR–WA CMSA</b>												
	<b>Manufacturing ....</b>	–	<b>3 828</b>	<b>1 170</b>	<b>149 132</b>	<b>5 101 996</b>	<b>107 876</b>	<b>213 841</b>	<b>3 120 336</b>	<b>20 335 240</b>	<b>15 291 633</b>	<b>35 464 372</b>	<b>2 016 207</b>
	Portland–Salem, OR–WA CMSA (OR Part) .....	–	3 407	1 039	129 595	4 386 764	92 560	183 708	2 630 978	18 349 799	13 385 498	31 610 060	1 501 888
	Portland–Salem, OR–WA CMSA (WA Part) .....	–	421	131	19 537	715 232	15 316	30 133	489 358	1 985 441	1 906 135	3 854 312	514 319
311	Food mfg.....	1	244	107	12 295	353 235	9 086	17 599	219 058	1 240 619	1 778 639	3 016 301	92 405
312	Beverage & tobacco product mfg.....	1	55	16	1 562	48 081	763	1 392	22 598	176 277	265 102	439 487	D
313	Textile mills.....	–	19	5	f	D	D	D	D	D	D	D	D
314	Textile product mills.....	3	58	13	964	18 506	757	1 395	11 907	25 660	35 100	61 069	D
315	Apparel mfg.....	–	57	21	g	D	D	D	D	D	D	D	D
316	Leather & allied product mfg ..	1	22	5	453	9 997	362	698	6 453	24 391	15 036	39 301	D
321	Wood product mfg.....	–	238	98	8 923	243 127	7 534	14 829	178 779	564 198	1 250 612	1 814 835	38 654
322	Paper mfg.....	–	58	40	i	D	D	D	D	D	D	D	D
323	Printing & related support activities.....	1	452	80	6 910	225 235	5 072	9 771	145 199	495 891	377 496	868 843	D
324	Petroleum & coal products mfg.....	5	17	9	f	D	D	D	D	D	D	D	D
325	Chemical mfg.....	2	130	45	2 885	116 588	1 585	3 035	47 406	428 890	353 217	780 773	D
326	Plastics & rubber products mfg.....	1	183	70	6 748	177 873	5 099	9 716	109 625	430 174	456 972	885 641	D
327	Nonmetallic mineral product mfg.....	–	144	41	3 472	119 229	2 689	5 597	85 151	342 917	273 094	612 735	D
331	Primary metal mfg.....	–	58	35	i	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	1	699	210	17 005	545 931	12 860	25 578	352 473	1 275 386	1 009 001	2 260 083	92 992
333	Machinery mfg.....	–	316	101	11 264	419 441	7 190	14 435	224 568	907 962	868 122	1 783 878	61 377
334	Computer & electronic product mfg.....	–	246	102	34 951	1 412 942	22 292	45 765	737 756	10 469 852	4 278 269	14 645 263	D
335	Electrical equipment, appliance, & component mfg.....	1	58	19	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	–	140	52	j	D	D	D	D	D	D	D	D
337	Furniture & related product mfg.....	2	254	44	4 033	103 741	3 061	5 868	70 017	207 590	173 787	383 835	D
339	Miscellaneous mfg.....	1	380	57	6 622	192 011	4 509	8 501	95 521	427 182	300 406	719 649	27 701

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>PORTLAND–SALEM, OR—WA CMSA—Con.</b>												
	<b>Portland–Vancouver, OR—WA PMSA</b>												
<b>31-33</b>	<b>Manufacturing . . . .</b>	–	<b>3 363</b>	<b>1 025</b>	<b>134 123</b>	<b>4 684 217</b>	<b>96 066</b>	<b>190 898</b>	<b>2 851 556</b>	<b>19 245 780</b>	<b>13 780 856</b>	<b>32 874 201</b>	<b>1 902 986</b>
	Portland–Vancouver, OR—WA PMSA (OR Part) . . . . .	–	2 942	894	114 586	3 968 985	80 750	160 765	2 362 198	17 260 339	11 874 721	29 019 889	1 388 667
	Portland–Vancouver, OR—WA PMSA (WA Part) . . . . .	–	421	131	19 537	715 232	15 316	30 133	489 358	1 985 441	1 906 135	3 854 312	514 319
311	Food mfg. . . . .	–	201	83	8 563	261 857	6 035	11 786	154 842	994 995	1 241 953	2 234 222	75 331
3112	Grain & oilseed milling . . . .	–	8	4	e	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg. . . . .	–	28	15	1 456	45 513	1 113	2 249	21 903	144 179	122 812	270 763	4 256
31141	Frozen food mfg. . . . .	–	11	8	757	25 534	550	1 169	11 177	86 028	73 830	164 562	2 690
311411	Frozen fruit, juice, & vegetable mfg. . . . .	–	9	6	e	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg. . . . .	–	2	2	e	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying . . . . .	–	17	7	699	19 979	563	1 080	10 726	58 151	48 982	106 201	1 566
311421	Fruit & vegetable canning . . . . .	–	15	7	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg. . . . .	–	13	12	847	26 475	528	1 075	15 170	109 563	278 495	387 310	15 092
31151	Dairy product (except frozen) mfg. . . . .	–	12	11	f	D	D	D	D	D	D	D	15 092
311511	Fluid milk mfg. . . . .	–	10	9	f	D	D	D	D	D	D	D	D
3116	Meat product mfg. . . . .	3	27	10	674	15 717	543	989	10 514	43 752	119 493	162 986	2 589
31161	Animal slaughtering & processing . . . . .	3	27	10	674	15 717	543	989	10 514	43 752	119 493	162 986	2 589
311612	Meat processed from carcasses . . . . .	5	18	7	f	D	D	D	D	D	D	D	2 407
3118	Bakeries & tortilla mfg. . . . .	–	72	26	3 387	104 060	2 284	4 290	67 580	282 751	244 209	526 805	25 434
31181	Bread & bakery product mfg. . . . .	1	58	21	2 436	69 288	1 472	2 689	39 366	174 918	138 127	313 055	D
311811	Retail bakeries . . . . .	3	22	3	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries . . . . .	–	33	17	2 024	62 139	1 216	2 240	34 882	156 350	122 456	278 846	12 448
31182	Cookie, cracker, & pasta mfg. . . . .	–	12	4	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg. . . . .	–	8	3	683	28 124	587	1 149	22 787	82 623	62 523	144 912	D
3119	Other food mfg. . . . .	1	27	12	1 600	48 649	1 170	2 411	27 799	326 769	274 423	596 548	19 691
31191	Snack food mfg. . . . .	1	3	2	f	D	D	D	D	D	D	D	D
311919	Other snack food mfg. . . . .	1	2	2	f	D	D	D	D	D	D	D	D
31199	All other food mfg. . . . .	–	11	5	447	7 732	322	638	5 082	41 440	57 756	97 387	1 493
311991	Perishable prepared food mfg. . . . .	–	8	4	e	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg. . . . .	–	42	13	1 413	44 019	684	1 264	20 680	158 369	239 319	396 092	10 104
3121	Beverage mfg. . . . .	–	42	13	1 413	44 019	684	1 264	20 680	158 369	239 319	396 092	10 104
31211	Soft drink & ice mfg. . . . .	–	8	5	658	20 970	320	604	8 652	61 752	171 074	233 340	D
312111	Soft drink mfg. . . . .	–	4	4	607	19 864	283	549	8 073	58 396	166 470	225 370	4 944
31212	Breweries . . . . .	–	11	4	534	18 525	287	561	10 542	80 943	56 624	137 743	D
312120	Breweries . . . . .	–	11	4	534	18 525	287	561	10 542	80 943	56 624	137 743	D
313	Textile mills . . . . .	–	17	4	510	15 483	387	642	11 210	30 045	55 825	86 333	D
3132	Fabric mills . . . . .	–	10	3	e	D	D	D	D	D	D	D	D
31321	Broadwoven fabric mills . . . . .	–	6	2	e	D	D	D	D	D	D	D	D
313210	Broadwoven fabric mills . . . . .	–	6	2	e	D	D	D	D	D	D	D	D
314	Textile product mills . . . . .	3	50	10	830	15 774	650	1 201	10 109	21 810	31 518	53 674	1 510
3141	Textile furnishings mills . . . .	2	19	4	382	7 929	311	635	5 446	9 041	16 457	25 635	805
31412	Curtain & linen mills . . . . .	2	19	4	382	7 929	311	635	5 446	9 041	16 457	25 635	805
3149	Other textile product mills . . .	4	31	6	448	7 845	339	566	4 663	12 769	15 061	28 039	705
31491	Textile bag & canvas mills . . . . .	4	18	4	e	D	D	D	D	D	D	D	409
315	Apparel mfg. . . . .	–	48	17	1 903	33 693	1 682	3 446	26 742	79 432	83 245	162 069	D
3152	Cut & sew apparel mfg. . . . .	–	35	15	g	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors . . . . .	1	18	8	f	D	D	D	D	D	D	D	D
315212	Women's, girls', & infants' cut & sew apparel contractors . . . . .	1	14	6	672	10 227	629	1 145	9 182	13 205	1 298	14 411	D
31522	Men's & boys' cut & sew apparel mfg. . . . .	–	7	4	e	D	D	D	D	D	D	D	D
31523	Women's & girls' cut & sew apparel mfg. . . . .	–	7	3	f	D	D	D	D	D	D	D	D
315239	Women's & girls' cut & sew other outerwear mfg. . . . .	–	4	3	e	D	D	D	D	D	D	D	D
316	Leather & allied product mfg. . .	–	16	5	413	9 167	328	641	5 868	22 534	13 190	35 590	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>PORTLAND-SALEM, OR-WA CMSA—Con.</b> <b>Portland-Vancouver, OR-WA PMSA—Con.</b> <b>Manufacturing—Con.</b>												
321	Wood product mfg .....	-	189	72	5 952	161 443	5 015	9 603	119 318	389 887	864 847	1 256 602	26 246
3211	Sawmills & wood preservation .....	-	40	19	2 272	69 370	1 993	4 076	56 645	189 584	591 209	782 692	15 448
32111	Sawmills & wood preservation .....	-	40	19	2 272	69 370	1 993	4 076	56 645	189 584	591 209	782 692	15 448
321113	Sawmills .....	-	35	15	2 062	62 102	1 847	3 772	52 388	166 931	526 525	693 690	14 538
3212	Veneer, plywood, & engineered wood product mfg .....	2	29	16	940	26 428	747	1 513	17 754	56 485	87 415	144 003	2 400
32121	Veneer, plywood, & engineered wood product mfg .....	2	29	16	940	26 428	747	1 513	17 754	56 485	87 415	144 003	2 400
321214	Truss mfg .....	3	16	11	524	15 158	386	755	8 540	32 279	32 539	64 991	1 119
3219	Other wood product mfg ...	1	120	37	2 740	65 645	2 275	4 014	44 919	143 818	186 223	329 907	8 398
32191	Millwork .....	1	54	22	1 445	39 331	1 216	2 275	26 780	84 790	109 029	193 502	6 145
321911	Wood window & door mfg .....	1	20	8	612	17 709	509	957	11 579	42 091	41 322	83 708	1 621
321912	Cut stock, resawing lumber, & planing....	-	22	9	517	13 757	452	856	10 272	26 496	39 588	65 308	4 000
321918	Other millwork (including flooring) ...	-	12	5	316	7 865	255	462	4 929	16 203	28 119	44 486	524
32192	Wood container & pallet mfg .....	-	23	8	418	8 766	353	631	6 066	17 522	32 244	49 680	1 277
321920	Wood container & pallet mfg .....	-	23	8	418	8 766	353	631	6 066	17 522	32 244	49 680	1 277
32199	All other wood product mfg .....	1	43	7	877	17 548	706	1 108	12 073	41 506	44 950	86 725	976
321991	Manufactured home (mobile home) mfg ..	-	2	2	e	D	D	D	D	D	D	D	D
321999	All other miscellaneous wood product mfg ...	6	33	4	337	5 126	277	419	3 830	10 681	8 553	19 476	639
322	Paper mfg .....	-	55	38	7 466	301 557	6 075	11 968	220 025	1 135 865	1 163 372	2 311 160	D
3221	Pulp, paper, & paperboard mills .....	-	6	6	4 113	184 440	3 433	6 789	142 605	775 319	748 489	1 535 651	D
32212	Paper mills .....	-	6	6	4 113	184 440	3 433	6 789	142 605	775 319	748 489	1 535 651	D
322121	Paper (except newsprint) mills .....	-	4	4	h	D	D	D	D	D	D	D	D
322122	Newsprint mills .....	-	2	2	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	49	32	3 353	117 117	2 642	5 179	77 420	360 546	414 883	775 509	D
32221	Paperboard container mfg .....	-	17	13	1 248	46 454	957	1 834	30 678	110 794	170 660	280 583	D
322211	Corrugated & solid fiber box mfg .....	-	8	6	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	-	16	11	1 306	47 442	1 050	2 171	32 995	127 855	171 092	301 201	D
322221	Coated & laminated packaging paper & plastics film mfg .....	-	1	1	e	D	D	D	D	D	D	D	D
322224	Uncoated paper & multiwall bag mfg .....	-	6	6	663	22 045	544	1 052	15 764	53 352	63 989	117 344	D
32223	Stationery product mfg ..	1	9	5	f	D	D	D	D	D	D	D	D
322232	Envelope mfg .....	1	5	4	e	D	D	D	D	D	D	D	D
32229	Other converted paper product mfg .....	-	7	3	e	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	417	76	6 502	213 655	4 763	9 138	137 484	464 175	361 950	820 976	34 530
3231	Printing & related support activities .....	1	417	76	6 502	213 655	4 763	9 138	137 484	464 175	361 950	820 976	34 530
32311	Printing .....	1	359	63	5 609	180 919	4 064	7 739	114 259	405 234	347 421	746 851	30 365
323110	Commercial lithographic printing ..	-	161	30	2 924	107 327	2 084	4 025	68 460	219 327	229 298	444 843	15 325
323112	Commercial flexographic printing ..	-	9	8	336	10 870	212	407	5 113	31 260	34 400	65 162	D
323113	Commercial screen printing .....	4	36	4	412	9 470	301	536	5 482	21 125	14 309	35 333	1 448
323114	Quick printing .....	1	87	4	544	13 355	418	735	9 940	34 658	12 346	46 961	2 351
323116	Manifold business form printing .....	-	14	8	463	16 414	357	753	10 634	47 152	20 579	67 422	2 799
323118	Blankbook, looseleaf binder, & device mfg ..	9	5	3	e	D	D	D	D	D	D	D	D
323119	Other commercial printing .....	5	36	4	369	9 742	251	434	5 142	23 322	15 508	38 018	1 194
32312	Support activities for printing .....	-	58	13	893	32 736	699	1 399	23 225	58 941	14 529	74 125	4 165
323121	Tradebinding & related work .....	-	24	6	373	11 309	307	642	8 368	18 328	5 653	24 321	796
323122	Prepress services .....	-	34	7	520	21 427	392	757	14 857	40 613	8 876	49 804	3 369

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>PORTLAND-SALEM, OR-WA CMSA—Con.</b>												
	<b>Portland-Vancouver, OR-WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
324	Petroleum & coal products mfg .....	4	14	6	429	16 961	290	623	10 558	77 567	143 905	223 382	5 562
3241	Petroleum & coal products mfg .....	4	14	6	429	16 961	290	623	10 558	77 567	143 905	223 382	5 562
32412	Asphalt paving, roofing, & saturated materials mfg .....	4	6	4	e	D	D	D	D	D	D	D	D
324122	Asphalt shingle & coating materials mfg .....	5	3	3	e	D	D	D	D	D	D	D	D
325	Chemical mfg .....	2	118	38	2 578	102 885	1 402	2 643	42 874	380 688	300 148	679 936	47 733
3251	Basic chemical mfg .....	1	19	5	369	16 741	217	433	8 522	90 324	61 901	152 259	19 195
3254	Pharmaceutical & medicine mfg .....	5	18	11	703	21 802	396	598	9 145	61 129	33 925	94 678	5 585
32541	Pharmaceutical & medicine mfg .....	5	18	11	703	21 802	396	598	9 145	61 129	33 925	94 678	5 585
325413	In-vitro diagnostic substance mfg .....	3	5	5	e	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg .....	—	19	4	393	17 157	213	451	6 401	62 885	64 628	127 146	D
3259	Other chemical product mfg .....	2	32	12	616	27 285	292	624	9 880	103 366	86 963	189 245	D
32599	All other chemical product & preparation mfg .....	3	22	7	374	18 153	183	390	6 372	82 864	58 978	141 763	D
325998	All other miscellaneous chemical product & preparation mfg .....	3	14	7	313	16 461	142	319	5 461	78 020	53 532	131 335	6 679
326	Plastics & rubber products mfg .....	1	158	66	6 286	166 815	4 710	8 956	101 507	402 481	428 323	829 259	35 239
3261	Plastics product mfg .....	1	128	55	5 392	139 662	3 994	7 511	83 518	328 917	366 518	694 458	28 536
32611	Unsupported plastics film, sheet, & bag mfg ..	1	9	3	e	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	1	20	8	618	16 825	432	854	10 426	32 550	57 736	93 414	9 481
326121	Unsupported plastics profile shape mfg .....	1	12	3	278	7 199	190	374	4 041	14 770	12 592	27 962	D
326122	Plastics pipe & pipe fitting mfg .....	1	8	5	340	9 626	242	480	6 385	17 780	45 144	65 452	D
32619	Other plastics product mfg .....	1	81	37	4 071	104 437	3 009	5 520	61 745	247 063	242 671	485 969	16 284
326199	All other plastics product mfg .....	1	79	37	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	30	11	894	27 153	716	1 445	17 989	73 564	61 805	134 801	6 703
32621	Tire mfg .....	—	7	2	371	9 662	313	641	7 256	22 256	24 448	46 595	D
326212	Tire retreading .....	—	7	2	371	9 662	313	641	7 256	22 256	24 448	46 595	D
32629	Other rubber product mfg .....	—	20	9	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	—	124	37	3 254	112 855	2 525	5 295	80 623	324 713	262 642	584 360	D
3272	Glass & glass product mfg ..	—	35	13	1 091	35 640	813	1 556	24 787	101 694	91 599	193 103	D
32721	Glass & glass product mfg .....	—	35	13	1 091	35 640	813	1 556	24 787	101 694	91 599	193 103	D
327215	Glass product mfg made of purchased glass .....	—	23	7	552	16 139	382	677	10 594	32 936	50 932	84 640	D
3273	Cement & concrete product mfg .....	—	47	15	g	D	D	D	D	D	D	D	10 882
32732	Ready-mix concrete mfg ..	—	20	9	778	33 161	658	1 548	25 791	86 039	77 500	163 857	6 673
327320	Ready-mix concrete mfg .....	—	20	9	778	33 161	658	1 548	25 791	86 039	77 500	163 857	6 673
32733	Concrete pipe, brick, & block mfg .....	1	12	4	347	10 722	245	520	6 334	29 086	24 467	51 836	2 675
327332	Concrete pipe mfg .....	—	7	4	e	D	D	D	D	D	D	D	1 402
3279	Other nonmetallic mineral product mfg .....	1	19	4	e	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ..	1	16	3	439	15 850	341	814	12 404	61 317	38 399	97 735	D
327993	Mineral wool mfg .....	1	2	2	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>PORTLAND-SALEM, OR-WA CMSA—Con.</b> <b>Portland-Vancouver, OR-WA PMSA—Con.</b> <b>Manufacturing—Con.</b>												
331	Primary metal mfg . . . . .	—	50	30	7 697	271 684	6 074	12 487	187 957	650 669	783 726	1 408 067	93 325
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	3	2	g	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	3	2	g	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	3	2	g	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	—	5	2	e	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	2	1	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	2	1	e	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing . . . . .	—	10	9	g	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing . . . . .	—	10	9	g	D	D	D	D	D	D	D	D
331312	Primary aluminum production . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
331316	Aluminum extruded product mfg . . . . .	—	3	3	e	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	29	16	4 746	147 243	3 805	7 757	105 396	395 795	204 436	601 151	D
33151	Ferrous metal foundries . . . . .	—	13	9	3 737	118 927	3 030	6 312	85 664	309 616	175 036	483 762	D
331512	Steel investment foundries . . . . .	—	3	3	g	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment) . . . . .	—	4	4	1 112	41 193	948	1 807	29 172	105 940	106 713	215 390	D
33152	Nonferrous metal foundries . . . . .	—	16	7	1 009	28 316	775	1 445	19 732	86 179	29 400	117 389	D
331528	Other nonferrous foundries (except die-casting) . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	625	183	15 146	493 384	11 442	22 932	320 248	1 125 746	844 544	1 953 603	83 066
3321	Forging & stamping . . . . .	3	22	9	609	21 407	448	884	11 726	43 430	36 113	79 452	7 339
33211	Forging & stamping . . . . .	3	22	9	609	21 407	448	884	11 726	43 430	36 113	79 452	7 339
332116	Metal stamping . . . . .	3	11	6	e	D	D	D	D	D	D	D	D
3322	Cutlery & handtool mfg . . . . .	—	20	9	2 238	74 615	1 662	3 609	46 301	261 230	179 544	430 659	13 037
33221	Cutlery & handtool mfg . . . . .	—	20	9	2 238	74 615	1 662	3 609	46 301	261 230	179 544	430 659	13 037
332212	Hand & edge tool mfg . . . . .	—	12	5	g	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg . . . . .	—	7	3	g	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	—	148	55	4 294	140 773	3 130	6 191	87 846	290 435	287 455	570 258	10 402
33231	Plate work & fabricated structural product mfg . . . . .	1	57	20	1 197	46 753	870	1 802	29 176	84 197	110 213	187 901	2 988
332312	Fabricated structural metal mfg . . . . .	1	47	17	1 095	43 900	789	1 674	27 314	79 833	106 827	180 225	2 843
33232	Ornamental & architectural metal products mfg . . . . .	—	91	35	3 097	94 020	2 260	4 389	58 670	206 238	177 242	382 357	7 414
332321	Metal window & door mfg . . . . .	—	10	6	1 019	28 648	782	1 568	18 478	72 780	83 309	156 948	1 921
332322	Sheet metal work mfg . . . . .	—	56	28	1 838	59 136	1 313	2 510	36 795	115 948	83 219	197 933	4 970
3324	Boiler, tank, & shipping container mfg . . . . .	—	17	10	866	33 721	625	1 311	22 212	62 018	96 882	159 289	7 757
33241	Power boiler & heat exchanger mfg . . . . .	—	6	4	e	D	D	D	D	D	D	D	D
332410	Power boiler & heat exchanger mfg . . . . .	—	6	4	e	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	—	6	3	e	D	D	D	D	D	D	D	D
3325	Hardware mfg . . . . .	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
33251	Hardware mfg . . . . .	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
332510	Hardware mfg . . . . .	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
3326	Spring & wire product mfg . . . . .	1	24	11	893	24 629	709	1 411	17 290	49 973	34 189	85 637	3 253
33261	Spring & wire product mfg . . . . .	1	24	11	893	24 629	709	1 411	17 290	49 973	34 189	85 637	3 253
332618	Other fabricated wire product mfg . . . . .	1	17	7	678	17 633	552	1 108	12 733	37 193	25 912	64 983	2 626

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>PORTLAND-SALEM, OR-WA CMSA—Con.</b>												
	<b>Portland-Vancouver, OR-WA PMSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	251	43	3 307	109 133	2 528	4 769	73 833	209 264	92 823	300 396	21 340
33271	Machine shops . . . . .	1	228	35	2 761	90 096	2 095	3 939	61 022	174 053	75 995	248 290	15 771
332710	Machine shops . . . . .	1	228	35	2 761	90 096	2 095	3 939	61 022	174 053	75 995	248 290	15 771
33272	Turned product & screw, nut, & bolt mfg . . . . .	2	23	8	546	19 037	433	830	12 811	35 211	16 828	52 106	5 569
332721	Precision turned product mfg . . . . .	—	18	6	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities .	2	62	21	1 088	30 287	881	1 720	21 189	77 867	29 467	107 585	11 865
33281	Coating, engraving, heat treating, & allied activities . . . . .	2	62	21	1 088	30 287	881	1 720	21 189	77 867	29 467	107 585	11 865
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	3	24	9	502	13 172	414	775	9 264	29 841	15 157	44 929	1 757
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	3	29	8	414	11 376	339	655	8 122	22 747	7 573	30 440	D
3329	Other fabricated metal product mfg . . . . .	—	73	21	1 450	49 671	1 127	2 352	33 477	105 458	71 158	177 611	6 559
33291	Metal valve mfg . . . . .	—	6	3	333	11 669	251	568	7 493	29 888	22 581	51 596	D
33299	All other fabricated metal product mfg . . . . .	1	67	18	1 117	38 002	876	1 784	25 984	75 570	48 577	126 015	D
332996	Fabricated pipe & pipe fitting mfg . . . . .	—	14	4	429	14 954	340	696	10 404	30 192	28 663	59 940	3 093
332999	All other miscellaneous fabricated metal product mfg . . . . .	1	41	11	543	16 881	419	859	11 010	33 984	17 460	52 197	1 206
333	Machinery mfg . . . . .	—	270	87	10 376	392 323	6 582	13 242	207 612	858 453	812 880	1 679 119	57 280
3331	Agriculture, construction, & mining machinery mfg . . . .	—	18	8	1 292	51 270	870	1 838	30 319	93 312	148 767	240 484	11 293
33312	Construction machinery mfg . . . . .	—	7	3	503	19 798	325	642	12 160	23 032	44 985	68 075	D
333120	Construction machinery mfg . . . . .	—	7	3	503	19 798	325	642	12 160	23 032	44 985	68 075	D
33313	Mining & oil & gas field machinery mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
333131	Mining machinery & equipment mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg . .	—	64	28	2 693	104 683	1 441	2 800	48 926	271 829	225 915	498 201	16 658
33321	Sawmill & woodworking machinery mfg . . . . .	—	19	10	f	D	D	D	D	D	D	D	D
333210	Sawmill & woodworking machinery mfg . . . . .	—	19	10	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg . . . . .	—	43	18	1 950	79 757	940	1 750	34 797	239 463	175 747	414 837	D
333291	Paper industry machinery mfg . . . . .	—	13	9	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg . . . . .	—	20	7	1 057	47 328	515	913	19 808	96 483	104 503	199 237	D
3333	Commercial & service industry machinery mfg . .	—	28	9	1 377	48 748	914	1 788	24 756	109 644	85 381	197 197	5 184
33331	Commercial & service industry machinery mfg . . . . .	—	28	9	1 377	48 748	914	1 788	24 756	109 644	85 381	197 197	5 184
333314	Optical instrument & lens mfg . . . . .	—	8	2	560	22 068	441	852	12 599	39 490	43 357	82 534	2 549
333319	Other commercial & service industry machinery mfg . . . . .	—	16	6	731	23 936	456	904	11 726	71 081	38 800	110 297	2 528
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	17	6	1 658	55 932	1 207	2 740	37 066	91 871	130 122	222 574	7 290
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	17	6	1 658	55 932	1 207	2 740	37 066	91 871	130 122	222 574	7 290
333412	Industrial & commercial fan & blower mfg . . . . .	—	3	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/industrial refrig equip mfg . . . . .	—	6	3	e	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg . . . . .	3	67	9	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg . . . . .	3	67	9	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>PORTLAND-SALEM, OR-WA CMSA—Con.</b>												
	<b>Portland-Vancouver, OR-WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3339	Other general-purpose machinery mfg .....	1	70	24	2 536	102 217	1 567	2 999	47 273	238 895	194 243	438 886	12 630
33391	Pump & compressor mfg .....	—	6	5	633	24 569	345	723	11 081	76 880	64 678	147 487	D
333911	Pump & pumping equipment mfg .....	—	4	4	f	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg .....	—	18	8	960	36 269	624	1 048	16 292	77 097	56 903	130 455	7 418
333922	Conveyor & conveying equipment mfg .....	—	6	4	e	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg .....	1	11	4	656	26 833	380	710	11 612	53 846	39 200	92 382	D
33399	All other general-purpose machinery mfg .....	2	46	11	943	41 379	598	1 228	19 900	84 918	72 662	160 944	D
333991	Power-driven handtool mfg .....	1	3	2	e	D	D	D	D	D	D	D	D
333999	All other miscellaneous general-purpose machinery mfg .....	6	25	2	253	9 947	158	299	4 368	17 906	16 645	37 538	1 361
334	Computer & electronic product mfg .....	—	230	96	32 924	1 345 018	20 764	42 754	702 616	10 262 041	4 181 252	14 340 382	1 179 208
3341	Computer & peripheral equipment mfg .....	—	32	14	8 922	397 371	5 980	12 156	227 007	1 373 151	1 799 461	3 097 327	134 556
33411	Computer & peripheral equipment mfg .....	—	32	14	8 922	397 371	5 980	12 156	227 007	1 373 151	1 799 461	3 097 327	134 556
334111	Electronic computer mfg .....	1	9	6	g	D	D	D	D	D	D	D	D
334113	Computer terminal mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	—	16	5	i	D	D	D	D	D	D	D	114 328
3342	Communications equipment mfg .....	—	21	7	1 712	62 802	807	1 419	20 355	205 161	202 997	410 577	D
33421	Telephone apparatus mfg .....	—	7	2	f	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg .....	—	7	2	f	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	—	7	4	359	14 884	150	302	4 148	36 985	22 182	58 205	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	—	7	4	359	14 884	150	302	4 148	36 985	22 182	58 205	D
33429	Other communications equipment mfg .....	—	7	1	e	D	D	D	D	D	D	D	1 161
334290	Other communications equipment mfg .....	—	7	1	e	D	D	D	D	D	D	D	1 161
3343	Audio & video equipment mfg .....	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
33431	Audio & video equipment mfg .....	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
334310	Audio & video equipment mfg .....	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
3344	Semiconductor & other electronic component mfg .....	—	94	51	15 208	568 691	10 634	22 291	346 097	7 581 138	1 380 938	8 913 955	940 635
33441	Semiconductor & other electronic component mfg .....	—	94	51	15 208	568 691	10 634	22 291	346 097	7 581 138	1 380 938	8 913 955	940 635
334412	Bare printed circuit board mfg .....	—	21	7	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	—	25	18	8 814	371 315	6 190	13 423	246 125	7 155 236	1 057 978	8 168 363	897 566
334414	Electronic capacitor mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg .....	2	9	5	f	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg .....	—	9	7	1 287	45 310	708	1 408	16 769	91 084	96 449	187 138	4 981
334419	Other electronic component mfg .....	1	24	10	g	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>PORTLAND–SALEM, OR–WA CMSA—Con.</b>												
	<b>Portland–Vancouver, OR–WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg—Con.												
3345	Navigational, measuring, medical, & control instruments mfg .....	—	60	18	6 395	296 641	2 842	5 717	98 630	1 046 673	644 140	1 706 615	D
33451	Navigational, measuring, medical, & control instruments mfg .....	—	60	18	6 395	296 641	2 842	5 717	98 630	1 046 673	644 140	1 706 615	D
334510	Electromedical & electrotherapeutic apparatus mfg .....	—	6	4	f	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, & guidance instrument mfg .....	—	6	3	f	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg .....	—	18	7	4 656	222 762	2 154	4 303	78 304	845 212	532 612	1 387 035	67 107
335	Electrical equipment, appliance, & component mfg .....	1	55	19	1 580	53 172	1 033	2 046	27 113	162 640	131 234	289 591	D
3353	Electrical equipment mfg ..	3	31	9	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	3	31	9	f	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg .....	1	18	6	e	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	—	13	7	687	25 376	442	899	12 322	99 948	77 687	173 901	1 892
33599	All other electrical equipment & component mfg .....	3	8	4	e	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg .....	3	8	4	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	—	128	50	10 446	395 182	8 650	16 913	310 376	1 105 248	1 388 819	2 488 502	39 230
3361	Motor vehicle mfg .....	—	4	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	—	3	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	—	3	1	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg .....	2	24	7	f	D	D	D	D	D	D	D	1 436
33621	Motor vehicle body & trailer mfg .....	2	24	7	f	D	D	D	D	D	D	D	1 436
336214	Travel trailer & camper mfg .....	2	10	4	e	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	1	39	17	g	D	D	D	D	D	D	D	14 203
33632	Motor vehicle electrical & electronic equipment mfg .....	—	5	3	320	10 494	213	450	5 782	27 068	14 616	41 852	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	—	4	3	e	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	—	7	4	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	—	7	4	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	—	14	7	g	D	D	D	D	D	D	D	4 989
336399	All other motor vehicle parts mfg .....	—	14	7	g	D	D	D	D	D	D	D	4 989
3364	Aerospace product & parts mfg .....	—	21	6	2 261	98 939	1 771	3 427	81 261	245 720	95 864	336 397	13 124
33641	Aerospace product & parts mfg .....	—	21	6	2 261	98 939	1 771	3 427	81 261	245 720	95 864	336 397	13 124
336413	Other aircraft part & auxiliary equipment mfg .....	—	17	5	2 214	96 679	1 749	3 377	80 361	244 370	93 294	331 604	13 029
3365	Railroad rolling stock mfg ..	—	1	1	g	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg .....	—	1	1	g	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg .....	—	1	1	g	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	1	23	11	1 606	70 405	1 384	3 243	58 039	139 613	69 131	207 303	2 130
33661	Ship & boat building ....	1	23	11	1 606	70 405	1 384	3 243	58 039	139 613	69 131	207 303	2 130
336611	Ship building & repairing .....	1	14	9	1 514	68 478	1 302	3 135	56 605	134 668	65 843	200 511	2 046

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>PORTLAND–SALEM, OR—WA CMSA—Con.</b>													
	<b>Portland–Vancouver, OR—WA PMSA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg—Con.													
3369	Other transportation equipment mfg .....	-	16	7	f	D	D	D	D	D	D	D	D	
33699	Other transportation equipment mfg .....	-	16	7	f	D	D	D	D	D	D	D	D	
336999	All other transportation equipment mfg .....	-	10	4	e	D	D	D	D	D	D	D	D	
337	Furniture & related product mfg .....	1	217	43		3 752	98 335	2 841	5 509	65 988	197 788	164 695	364 923	7 304
3371	Household & institutional furniture & kitchen cabinet mfg .....	1	161	28		2 570	59 999	2 106	4 115	43 989	112 878	105 424	221 649	D
33711	Wood kitchen cabinet & counter top mfg .....	1	97	12		1 378	34 121	1 055	2 023	23 949	61 592	54 715	119 497	1 805
337110	Wood kitchen cabinet & counter top mfg ...	1	97	12		1 378	34 121	1 055	2 023	23 949	61 592	54 715	119 497	1 805
33712	Household & institutional furniture mfg .....	2	64	16		1 192	25 878	1 051	2 092	20 040	51 286	50 709	102 152	D
337121	Upholstered household furniture mfg .....	2	21	5		610	13 458	552	1 139	10 727	26 835	25 951	52 796	D
337122	Nonupholstered wood household furniture mfg .....	2	29	5		380	8 055	339	670	6 328	16 372	18 469	34 886	490
3372	Office furniture (including fixtures) mfg .....	2	44	11	f	D	D	D	D	D	D	D	D	3 377
33721	Office furniture (including fixtures) mfg .....	2	44	11	f	D	D	D	D	D	D	D	D	3 377
337215	Showcase, partition, shelving, & locker mfg .....	3	26	8		628	23 207	360	685	12 945	41 888	29 557	70 768	2 105
3379	Other furniture related product mfg .....	-	12	4	e	D	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	1	339	52		6 103	178 955	4 134	7 809	87 806	400 634	283 469	676 359	23 507
3391	Medical equipment & supplies mfg .....	2	134	20		2 441	81 754	1 668	3 466	39 729	191 536	99 229	288 832	13 125
33911	Medical equipment & supplies mfg .....	2	134	20		2 441	81 754	1 668	3 466	39 729	191 536	99 229	288 832	13 125
339114	Dental equipment & supplies mfg .....	-	26	8		1 277	49 673	875	1 639	22 669	108 143	57 532	163 216	9 974
339116	Dental laboratories ...	4	73	3		385	10 078	291	504	6 687	22 096	7 585	29 905	D
3399	Other miscellaneous mfg ..	1	205	32		3 662	97 201	2 466	4 343	48 077	209 098	184 240	387 527	10 382
33992	Sporting & athletic goods mfg .....	1	47	9		830	23 041	594	1 088	12 357	67 574	50 218	113 030	3 593
339920	Sporting & athletic goods mfg .....	1	47	9		830	23 041	594	1 088	12 357	67 574	50 218	113 030	3 593
33993	Doll, toy, & game mfg ...	-	12	3		614	11 593	471	532	6 290	14 749	42 416	57 816	D
339932	Game, toy, & children's vehicle mfg .....	-	9	2	f	D	D	D	D	D	D	D	D	D
33995	Sign mfg .....	2	62	6		809	25 305	476	963	11 578	50 956	33 474	83 957	D
339950	Sign mfg .....	2	62	6		809	25 305	476	963	11 578	50 956	33 474	83 957	D
33999	All other miscellaneous mfg .....	1	52	12		1 221	31 613	806	1 563	15 620	64 380	43 083	106 610	D
339994	Broom, brush, & mop mfg .....	-	3	2	e	D	D	D	D	D	D	D	D	D
339999	All other miscellaneous mfg .....	4	36	6		385	9 401	259	423	4 752	22 210	15 841	37 865	D
	<b>RICHLAND–KENNEWICK–PASCO, WA MSA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>168</b>	<b>31</b>		<b>6 764</b>	<b>208 594</b>	<b>5 302</b>	<b>10 984</b>	<b>134 328</b>	<b>646 665</b>	<b>1 408 500</b>	<b>2 045 956</b>	<b>65 247</b>
311	Food mfg .....	-	26	11		4 178	97 612	3 699	7 523	78 049	341 054	1 037 427	1 364 650	41 820
3114	Fruit & vegetable preserving & specialty food mfg .....	-	8	8	g	D	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	7	7		2 365	58 876	2 159	4 077	46 727	217 353	261 247	472 514	27 734
311411	Frozen fruit, juice, & vegetable mfg .....	-	7	7		2 365	58 876	2 159	4 077	46 727	217 353	261 247	472 514	27 734
3116	Meat product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	-	1	1	g	D	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	-	1	1	g	D	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>RICHLAND—KENNEWICK—PASCO, WA MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
325	Chemical mfg . . . . .	-	11	4	1 043	61 281	567	1 552	26 554	138 991	233 453	376 964	D
3251	Basic chemical mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
32518	Other basic inorganic chemical mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3253	Pesticide, fertilizer, & other agricultural chemical mfg . . . . .	1	7	3	e	D	D	D	D	D	D	D	D
32531	Fertilizer mfg . . . . .	-	5	3	e	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg . . . . .	4	15	6	e	D	D	D	D	D	D	D	1 016
	<b>SEATTLE—TACOMA—BREMERTON, WA CMSA</b>												
<b>31-33</b>	<b>Manufacturing . . . . .</b>	<b>2</b>	<b>4 858</b>	<b>1 326</b>	<b>219 765</b>	<b>9 460 354</b>	<b>129 167</b>	<b>260 724</b>	<b>4 632 430</b>	<b>20 140 857</b>	<b>32 052 250</b>	<b>51 625 734</b>	<b>1 246 996</b>
311	Food mfg . . . . .	2	417	150	16 028	463 761	11 160	23 170	302 763	1 609 895	2 112 463	3 718 350	D
312	Beverage & tobacco product mfg . . . . .	2	48	20	g	D	D	D	D	D	D	D	D
313	Textile mills . . . . .	2	35	5	e	D	D	D	D	D	D	D	D
314	Textile product mills . . . . .	2	115	20	g	D	D	D	D	D	D	D	D
315	Apparel mfg . . . . .	1	142	36	h	D	D	D	D	D	D	D	D
316	Leather & allied product mfg . . . . .	-	24	6	f	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	1	235	87	i	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	-	69	37	h	D	D	D	D	D	D	D	68 932
323	Printing & related support activities . . . . .	2	600	109	i	D	D	D	D	D	D	D	45 772
324	Petroleum & coal products mfg . . . . .	2	19	7	f	D	D	D	D	D	D	D	D
325	Chemical mfg . . . . .	1	127	36	g	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	173	74	i	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	187	64	i	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	43	21	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	760	181	j	D	D	D	D	D	D	D	78 183
333	Machinery mfg . . . . .	1	274	78	i	D	D	D	D	D	D	D	34 108
334	Computer & electronic product mfg . . . . .	1	330	116	k	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	1	81	25	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	3	302	105	l	D	D	D	D	D	D	D	298 297
337	Furniture & related product mfg . . . . .	1	314	74	i	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	2	563	75	i	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Bremerton, WA PMSA</b>												
31-33	<b>Manufacturing . . . .</b>	2	143	16	1 441	36 809	1 016	1 680	20 851	81 349	59 960	142 740	3 842
339	Miscellaneous mfg. . . . .	1	24	3	303	9 053	190	336	4 069	16 435	13 264	30 375	1 062
	<b>Olympia, WA PMSA</b>												
31-33	<b>Manufacturing . . . .</b>	—	156	37	3 218	100 654	2 503	4 590	69 868	304 361	465 229	761 028	29 218
312	Beverage & tobacco product mfg. . . . .	—	6	3	383	14 320	276	561	10 226	61 708	138 238	201 429	1 734
3121	Beverage mfg. . . . .	—	6	3	383	14 320	276	561	10 226	61 708	138 238	201 429	1 734
322	Paper mfg. . . . .	—	4	2	e	D	D	D	D	D	D	D	415
3222	Converted paper product mfg. . . . .	—	4	2	e	D	D	D	D	D	D	D	415
32221	Paperboard container mfg. . . . .	—	3	2	e	D	D	D	D	D	D	D	415
322211	Corrugated & solid fiber box mfg. . . . .	—	3	2	e	D	D	D	D	D	D	D	415
326	Plastics & rubber products mfg. . . . .	—	8	5	613	16 943	532	1 013	12 407	71 469	49 506	118 112	17 715
3261	Plastics product mfg. . . . .	—	8	5	613	16 943	532	1 013	12 407	71 469	49 506	118 112	17 715
32619	Other plastics product mfg. . . . .	—	4	2	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg. . . . .	—	21	8	527	20 964	432	820	16 101	59 019	107 071	156 877	1 085
3324	Boiler, tank, & shipping container mfg. . . . .	—	3	3	e	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg. . . . .	—	2	2	e	D	D	D	D	D	D	D	D
	<b>Seattle-Bellevue- Everett, WA PMSA</b>												
31-33	<b>Manufacturing . . . .</b>	2	3 879	1 065	192 823	8 617 706	108 814	220 221	4 062 188	17 872 900	29 117 907	46 446 056	1 019 101
311	Food mfg. . . . .	2	339	125	13 701	401 994	9 487	19 574	260 682	1 296 063	1 687 303	2 975 480	67 766
3113	Sugar & confectionery product mfg. . . . .	4	20	5	284	5 084	230	312	3 483	12 931	9 044	22 123	733
3114	Fruit & vegetable preserving & specialty food mfg. . . . .	—	19	7	636	21 599	468	847	10 589	52 309	41 414	93 667	2 224
31141	Frozen food mfg. . . . .	—	12	6	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg. . . . .	—	10	4	e	D	D	D	D	D	D	D	D
3115	Dairy product mfg. . . . .	3	17	10	1 048	39 136	679	1 359	25 948	130 123	390 406	520 038	8 942
31151	Dairy product (except frozen) mfg. . . . .	2	11	6	734	27 232	427	821	16 166	99 714	305 800	403 293	5 518
311511	Fluid milk mfg. . . . .	3	7	5	f	D	D	D	D	D	D	D	4 697
31152	Ice cream & frozen dessert mfg. . . . .	8	6	4	314	11 904	252	538	9 782	30 409	84 606	116 745	3 424
311520	Ice cream & frozen dessert mfg. . . . .	8	6	4	314	11 904	252	538	9 782	30 409	84 606	116 745	3 424
3116	Meat product mfg. . . . .	4	22	12	1 214	32 108	1 005	1 817	25 097	122 506	200 913	326 855	5 535
31161	Animal slaughtering & processing. . . . .	4	22	12	1 214	32 108	1 005	1 817	25 097	122 506	200 913	326 855	5 535
311612	Meat processed from carcasses . . . . .	3	16	8	801	20 939	669	1 100	16 697	81 444	117 797	203 476	3 318
3117	Seafood product preparation & packaging. . . . .	2	62	40	4 027	124 847	3 451	7 941	102 439	336 469	432 501	768 551	18 729
31171	Seafood product preparation & packaging . . . . .	2	62	40	4 027	124 847	3 451	7 941	102 439	336 469	432 501	768 551	18 729
311711	Seafood canning . . . . .	3	17	5	326	7 517	262	464	4 349	19 797	28 893	48 611	1 284
311712	Fresh & frozen seafood processing. . . . .	2	45	35	3 701	117 330	3 189	7 477	98 090	316 672	403 608	719 940	17 445
3118	Bakeries & tortilla mfg. . . . .	2	147	34	5 096	140 605	2 655	5 340	69 961	405 001	322 083	725 655	25 395
31181	Bread & bakery product mfg. . . . .	3	123	26	4 238	113 978	2 065	4 296	56 812	233 170	186 308	421 184	14 083
311811	Retail bakeries . . . . .	7	71	1	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries . . . . .	3	50	24	3 732	104 687	1 689	3 715	51 173	206 922	162 871	370 009	12 743
31182	Cookie, cracker, & pasta mfg. . . . .	—	22	7	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg. . . . .	1	13	3	e	D	D	D	D	D	D	D	D
311822	Flour mixes & dough mfg from purchased flour . . . . .	—	4	2	412	17 352	258	521	7 442	121 752	107 456	223 953	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
311	Food mfg—Con.												
3119	Other food mfg .....	—	42	14	1 156	30 078	821	1 581	17 209	210 414	210 139	411 476	3 985
31192	Coffee & tea mfg .....	—	7	3	e	D	D	D	D	D	D	D	381
311920	Coffee & tea mfg .....	—	7	3	e	D	D	D	D	D	D	D	381
31194	Seasoning & dressing mfg .....	—	9	3	e	D	D	D	D	D	D	D	D
31199	All other food mfg .....	2	24	6	386	10 048	295	546	5 041	29 951	27 788	57 824	1 797
312	Beverage & tobacco product mfg .....	3	36	16	2 031	53 976	712	1 296	21 074	271 962	310 406	551 662	29 116
3121	Beverage mfg .....	3	36	16	2 031	53 976	712	1 296	21 074	271 962	310 406	551 662	29 116
31211	Soft drink & ice mfg .....	5	12	8	875	24 959	297	493	8 157	75 063	178 199	250 573	7 075
312111	Soft drink mfg .....	5	9	7	f	D	D	D	D	D	D	D	D
31212	Breweries .....	1	17	6	f	D	D	D	D	D	D	D	D
312120	Breweries .....	1	17	6	f	D	D	D	D	D	D	D	D
31213	Wineries .....	—	7	2	e	D	D	D	D	D	D	D	D
312130	Wineries .....	—	7	2	e	D	D	D	D	D	D	D	D
313	Textile mills .....	6	31	3	e	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	90	15	g	D	D	D	D	D	D	D	D
3149	Other textile product mills ..	3	72	11	f	D	D	D	D	D	D	D	D
31491	Textile bag & canvas mills .....	2	39	7	e	D	D	D	D	D	D	D	1 337
31499	All other textile product mills .....	4	33	4	e	D	D	D	D	D	D	D	D
314999	All other miscellaneous textile product mills ..	4	32	4	e	D	D	D	D	D	D	D	D
315	Apparel mfg .....	2	118	26	2 417	48 130	2 072	4 110	34 299	78 555	63 006	142 169	2 661
3152	Cut & sew apparel mfg ....	2	87	22	2 091	40 004	1 787	3 474	28 635	62 493	54 997	118 568	1 743
31521	Cut & sew apparel contractors .....	2	37	8	f	D	D	D	D	D	D	D	D
315211	Men's & boys' cut & sew apparel contractors .....	1	5	5	384	7 292	369	801	6 900	14 915	1 616	16 548	D
315212	Women's, girls', & infants' cut & sew apparel contractors ..	4	32	3	e	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg .....	1	14	5	f	D	D	D	D	D	D	D	D
315228	Men's & boys' cut & sew other outerwear mfg .....	1	12	4	f	D	D	D	D	D	D	D	D
31523	Women's & girls' cut & sew apparel mfg .....	1	22	7	f	D	D	D	D	D	D	D	D
315239	Women's & girls' cut & sew other outerwear mfg .....	—	9	5	e	D	D	D	D	D	D	D	D
31529	Other cut & sew apparel mfg .....	7	14	2	e	D	D	D	D	D	D	D	D
316	Leather & allied product mfg .	—	19	6	f	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg .....	—	15	6	f	D	D	D	D	D	D	D	D
31699	Other leather & allied product mfg .....	—	15	6	f	D	D	D	D	D	D	D	D
316991	Luggage mfg .....	—	6	4	e	D	D	D	D	D	D	D	D
321	Wood product mfg .....	1	146	51	4 225	129 325	3 336	6 840	91 047	292 419	530 031	813 756	30 958
3211	Sawmills & wood preservation .....	1	31	13	1 621	59 137	1 393	2 897	47 528	137 317	292 732	424 366	17 729
32111	Sawmills & wood preservation .....	1	31	13	1 621	59 137	1 393	2 897	47 528	137 317	292 732	424 366	17 729
321113	Sawmills .....	1	29	11	g	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg .....	2	12	7	413	11 808	314	650	7 121	25 750	27 114	52 411	1 170
32121	Veneer, plywood, & engineered wood product mfg .....	2	12	7	413	11 808	314	650	7 121	25 750	27 114	52 411	1 170

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
321	Wood product mfg—Con.												
3219	Other wood product mfg...	1	103	31	2 191	58 380	1 629	3 293	36 398	129 352	210 185	336 979	12 059
32191	Millwork .....	1	58	19	1 312	36 592	1 035	2 146	25 024	89 559	160 082	246 864	10 102
321911	Wood window & door mfg .....	1	33	12	761	20 728	575	1 164	13 260	45 154	65 777	112 095	1 258
321912	Cut stock, resawing lumber, & planing....	—	11	4	322	9 609	289	647	7 966	32 789	78 018	107 007	6 034
32192	Wood container & pallet mfg .....	—	14	4	304	7 325	224	440	4 242	11 335	17 885	29 030	903
321920	Wood container & pallet mfg .....	—	14	4	304	7 325	224	440	4 242	11 335	17 885	29 030	903
32199	All other wood product mfg .....	3	31	8	575	14 463	370	707	7 132	28 458	32 218	61 085	1 054
321999	All other miscellaneous wood product mfg ...	5	20	5	296	5 902	226	420	3 795	11 118	11 473	23 080	570
322	Paper mfg .....	—	48	24	2 890	125 263	2 135	4 249	86 603	433 284	329 165	739 078	37 027
3221	Pulp, paper, & paperboard mills .....	—	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	—	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	1	1	g	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	—	47	23	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	—	20	15	1 186	46 006	839	1 739	27 253	107 248	164 685	269 942	D
322211	Corrugated & solid fiber box mfg .....	—	14	10	771	30 921	533	1 076	17 123	79 405	122 042	199 565	13 249
322212	Folding paperboard box mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
32223	Stationery product mfg ..	2	15	6	f	D	D	D	D	D	D	D	D
322232	Envelope mfg .....	2	7	5	e	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	2	500	94	7 706	260 748	5 330	9 969	155 053	545 058	277 353	824 416	40 011
3231	Printing & related support activities .....	2	500	94	7 706	260 748	5 330	9 969	155 053	545 058	277 353	824 416	40 011
32311	Printing .....	2	451	80	6 653	217 337	4 588	8 478	128 555	456 553	263 169	722 159	37 172
323110	Commercial lithographic printing ..	2	208	48	3 896	136 305	2 629	5 048	79 712	264 306	163 040	429 874	26 438
323113	Commercial screen printing .....	3	59	10	604	14 783	408	712	7 957	32 341	19 536	51 903	1 911
323114	Quick printing .....	1	104	6	701	18 594	497	838	12 027	40 712	20 628	61 217	3 482
323116	Manifold business form printing .....	—	12	6	681	23 057	531	882	15 491	72 749	29 919	102 757	2 821
32312	Support activities for printing .....	—	49	14	1 053	43 411	742	1 491	26 498	88 505	14 184	102 257	2 839
323121	Tradebinding & related work .....	—	18	6	293	8 286	232	430	5 381	14 316	1 963	16 257	623
323122	Prepress services .....	—	31	8	760	35 125	510	1 061	21 117	74 189	12 221	86 000	2 216
325	Chemical mfg .....	1	105	29	1 894	85 815	1 051	2 078	32 301	294 949	245 918	536 062	29 661
3254	Pharmaceutical & medicine mfg .....	—	16	5	758	44 183	460	846	12 608	104 307	63 169	162 457	18 475
32541	Pharmaceutical & medicine mfg .....	—	16	5	758	44 183	460	846	12 608	104 307	63 169	162 457	18 475
325414	Biological product (except diagnostic) mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg .....	3	26	9	e	D	D	D	D	D	D	D	D
32551	Paint & coating mfg .....	—	17	8	326	12 292	135	283	4 915	35 028	40 873	74 876	1 233
325510	Paint & coating mfg .....	—	17	8	326	12 292	135	283	4 915	35 028	40 873	74 876	1 233
3259	Other chemical product mfg .....	2	19	6	289	11 360	162	360	6 087	46 955	43 288	91 329	3 556
326	Plastics & rubber products mfg .....	1	124	53	5 039	141 076	3 692	7 331	88 612	340 729	345 867	682 454	35 914
3261	Plastics product mfg .....	1	109	46	4 681	131 630	3 416	6 816	81 878	317 088	329 757	642 358	34 833
32611	Unsupported plastics film, sheet, & bag mfg ..	—	12	5	f	D	D	D	D	D	D	D	7 925
326111	Unsupported plastics bag mfg .....	—	5	2	e	D	D	D	D	D	D	D	D
326113	Unsupported plastics film & sheet (except packaging) mfg .....	—	7	3	e	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	—	7	3	598	16 087	288	533	6 182	47 851	36 891	85 140	D
326121	Unsupported plastics profile shape mfg .....	—	6	3	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
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	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
326	Plastics & rubber products mfg—Con.												
3261	Plastics product mfg—Con.												
32615	Urethane & other foam product (except polystyrene) mfg . . . . .	—	6	3	322	12 301	251	521	7 162	29 012	35 604	64 712	D
326150	Urethane & other foam product (except polystyrene) mfg . . . . .	—	6	3	322	12 301	251	521	7 162	29 012	35 604	64 712	D
32619	Other plastics product mfg . . . . .	1	71	30	2 838	72 860	2 136	4 225	46 802	168 049	136 961	301 741	14 765
326199	All other plastics product mfg . . . . .	1	66	28	2 777	71 476	2 088	4 138	45 891	164 803	133 310	294 820	14 698
3262	Rubber product mfg . . . . .	5	15	7	358	9 446	276	515	6 734	23 641	16 110	40 096	1 081
32629	Other rubber product mfg . . . . .	4	14	7	e	D	D	D	D	D	D	D	D
326299	All other rubber product mfg . . . . .	5	10	6	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	—	124	38	3 432	120 667	2 700	5 412	86 772	344 356	297 664	652 065	27 327
3272	Glass & glass product mfg . . . . .	—	47	9	1 666	51 815	1 366	2 684	40 775	152 879	84 270	244 747	15 798
32721	Glass & glass product mfg . . . . .	—	47	9	1 666	51 815	1 366	2 684	40 775	152 879	84 270	244 747	15 798
327213	Glass container mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass . . . . .	1	31	5	f	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg . . . . .	—	50	23	1 219	50 214	931	1 942	34 426	133 159	152 728	287 497	7 668
32732	Ready-mix concrete mfg . . . . .	—	22	12	630	27 136	515	1 095	20 397	67 636	84 437	151 651	3 129
327320	Ready-mix concrete mfg . . . . .	—	22	12	630	27 136	515	1 095	20 397	67 636	84 437	151 651	3 129
32739	Other concrete product mfg . . . . .	2	16	7	320	11 545	216	444	6 558	26 359	17 982	44 640	802
327390	Other concrete product mfg . . . . .	2	16	7	320	11 545	216	444	6 558	26 359	17 982	44 640	802
331	Primary metal mfg . . . . .	—	34	18	1 471	61 620	1 153	2 502	41 208	206 245	207 430	417 864	13 234
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	1	22	13	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	—	10	9	436	14 813	376	815	11 851	34 724	18 295	52 532	3 419
331513	Steel foundries (except investment) . . . . .	—	6	5	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	3	12	4	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	637	151	12 469	414 928	9 428	18 015	260 440	923 650	630 995	1 536 479	66 756
3321	Forging & stamping . . . . .	1	21	10	754	23 670	606	1 193	16 079	48 441	46 751	94 377	2 763
33211	Forging & stamping . . . . .	1	21	10	754	23 670	606	1 193	16 079	48 441	46 751	94 377	2 763
332114	Custom roll forming . . . . .	—	6	4	280	8 954	237	488	6 632	15 645	21 018	36 137	637
332116	Metal stamping . . . . .	—	8	5	420	13 089	326	626	8 223	29 626	22 593	51 908	1 843
3323	Architectural & structural metals mfg . . . . .	1	152	42	2 927	92 508	2 186	4 306	58 661	197 928	181 293	379 710	7 782
33231	Plate work & fabricated structural product mfg . . . . .	1	49	11	848	29 386	614	1 228	18 348	66 699	64 564	131 688	2 385
332312	Fabricated structural metal mfg . . . . .	—	36	9	671	23 592	491	973	14 755	55 289	54 933	110 640	1 958
33232	Ornamental & architectural metal products mfg . . . . .	1	103	31	2 079	63 122	1 572	3 078	40 313	131 229	116 729	248 022	5 397
332321	Metal window & door mfg . . . . .	3	16	6	481	15 040	336	737	9 240	29 773	35 121	65 003	915
332322	Sheet metal work mfg . . . . .	—	61	21	1 342	39 967	1 042	1 942	25 913	88 050	65 741	154 183	3 792
332323	Ornamental & architectural metal work mfg . . . . .	2	26	4	256	8 115	194	399	5 160	13 406	15 867	28 836	690
3324	Boiler, tank, & shipping container mfg . . . . .	—	14	9	511	21 347	372	797	15 841	51 374	112 675	161 824	2 578
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	—	7	4	332	14 978	260	582	12 269	42 242	106 239	146 748	1 501
332431	Metal can mfg . . . . .	—	3	3	275	13 263	223	483	11 204	39 614	102 655	140 120	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	—	291	50	4 547	153 811	3 682	6 533	104 466	326 030	144 149	457 495	36 602
33271	Machine shops . . . . .	1	259	42	3 878	126 489	3 125	5 411	84 971	273 601	113 987	375 520	30 273
332710	Machine shops . . . . .	1	259	42	3 878	126 489	3 125	5 411	84 971	273 601	113 987	375 520	30 273
33272	Turned product & screw, nut, & bolt mfg . . . . .	—	32	8	669	27 322	557	1 122	19 495	52 429	30 162	81 975	6 329
332721	Precision turned product mfg . . . . .	—	30	8	f	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities .	—	60	19	2 005	59 341	1 594	3 245	37 863	127 209	38 648	163 943	9 501
33281	Coating, engraving, heat treating, & allied activities . . . . .	—	60	19	2 005	59 341	1 594	3 245	37 863	127 209	38 648	163 943	9 501
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	1	26	9	f	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	—	27	8	1 143	34 605	841	1 673	19 450	72 036	23 039	93 850	4 518
3329	Other fabricated metal product mfg . . . . .	1	61	14	1 188	46 659	574	1 118	16 233	125 730	79 562	205 687	4 821
33299	All other fabricated metal product mfg . . . . .	1	53	11	f	D	D	D	D	D	D	D	3 997
332993	Ammunition (except small arms) mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg . . . . .	3	34	5	350	10 472	270	539	7 105	20 939	17 487	38 433	1 177
333	Machinery mfg . . . . .	1	227	72	6 538	239 443	4 300	8 353	125 980	583 699	571 414	1 151 460	31 221
3331	Agriculture, construction, & mining machinery mfg . . . . .	1	21	11	649	27 272	360	726	11 298	40 767	84 501	125 935	3 011
33312	Construction machinery mfg . . . . .	1	16	11	637	26 944	351	712	11 063	39 995	83 609	124 260	2 906
333120	Construction machinery mfg . . . . .	1	16	11	637	26 944	351	712	11 063	39 995	83 609	124 260	2 906
3332	Industrial machinery mfg . . . . .	2	44	9	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg . . . . .	2	35	9	702	31 049	367	790	14 087	67 094	40 967	109 224	2 251
333298	All other industrial machinery mfg . . . . .	—	17	3	375	17 489	194	413	7 546	36 425	21 107	58 045	1 115
3333	Commercial & service industry machinery mfg . . . . .	1	30	12	903	31 640	539	1 032	14 264	79 099	45 375	123 931	2 807
33331	Commercial & service industry machinery mfg . . . . .	1	30	12	903	31 640	539	1 032	14 264	79 099	45 375	123 931	2 807
333319	Other commercial & service industry machinery mfg . . . . .	1	18	8	680	24 201	437	841	11 406	58 016	32 862	90 656	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	12	6	555	19 158	436	827	11 049	65 591	41 630	105 331	1 919
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	12	6	555	19 158	436	827	11 049	65 591	41 630	105 331	1 919
333414	Heating equipment (except warm air furnaces) mfg . . . . .	—	7	4	438	14 234	360	663	8 836	49 746	25 106	72 826	1 782
3335	Metalworking machinery mfg . . . . .	—	40	11	978	38 663	606	1 032	18 697	95 796	72 753	162 857	7 935
33351	Metalworking machinery mfg . . . . .	—	40	11	978	38 663	606	1 032	18 697	95 796	72 753	162 857	7 935
333512	Machine tool (metal cutting types) mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg . . . . .	—	73	21	2 556	84 460	1 851	3 673	52 157	220 586	277 365	500 357	12 100
33392	Material handling equipment mfg . . . . .	—	28	11	1 787	54 646	1 367	2 745	36 709	155 522	241 286	397 648	7 077
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	—	11	5	g	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg . . . . .	1	39	10	748	29 154	472	908	15 121	63 410	34 403	99 365	4 923

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg.....	1	297	112	33 476	1 701 196	12 168	23 241	383 047	3 398 587	1 749 635	5 162 470	250 020
3341	Computer & peripheral equipment mfg.....	1	32	11	2 035	96 835	745	1 466	23 305	260 796	275 520	527 611	D
33411	Computer & peripheral equipment mfg.....	1	32	11	2 035	96 835	745	1 466	23 305	260 796	275 520	527 611	D
334119	Other computer peripheral equipment mfg.....	—	26	6	g	D	D	D	D	D	D	D	D
3342	Communications equipment mfg.....	3	42	18	g	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg.....	4	16	9	g	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg.....	4	16	9	g	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg.....	1	19	8	g	D	D	D	D	D	D	D	3 590
334220	Radio & TV broadcasting & wireless communications equipment mfg.....	1	19	8	g	D	D	D	D	D	D	D	3 590
3343	Audio & video equipment mfg.....	9	11	3	f	D	D	D	D	D	D	D	D
33431	Audio & video equipment mfg.....	9	11	3	f	D	D	D	D	D	D	D	D
334310	Audio & video equipment mfg.....	9	11	3	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	1	79	34	4 037	126 542	2 722	5 665	62 154	304 213	169 202	474 984	34 958
33441	Semiconductor & other electronic component mfg.....	1	79	34	4 037	126 542	2 722	5 665	62 154	304 213	169 202	474 984	34 958
334412	Bare printed circuit board mfg.....	1	19	10	1 393	42 737	1 098	2 481	28 848	102 869	53 832	157 337	5 357
334413	Semiconductor & related device mfg...	—	12	2	f	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg.....	2	6	4	e	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg.....	3	10	9	f	D	D	D	D	D	D	D	D
334419	Other electronic component mfg.....	1	29	8	948	34 029	451	904	11 158	75 463	35 933	110 663	D
3345	Navigational, measuring, medical, & control instruments mfg.....	—	109	38	23 850	1 329 107	7 031	13 137	258 064	2 490 561	986 468	3 495 053	173 751
33451	Navigational, measuring, medical, & control instruments mfg.....	—	109	38	23 850	1 329 107	7 031	13 137	258 064	2 490 561	986 468	3 495 053	173 751
334510	Electromedical & electrotherapeutic apparatus mfg.....	—	15	10	4 411	237 204	1 455	3 049	42 236	543 990	416 806	925 014	48 847
334511	Search, detection, navigation, & guidance instrument mfg.....	—	19	9	15 593	910 031	4 259	7 571	169 660	1 485 367	382 039	1 922 795	D
334515	Electricity measuring & testing instrument mfg.....	—	20	8	h	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg.....	—	22	5	620	33 153	435	793	16 492	51 492	27 853	79 182	1 980
3346	Mfg & reproducing magnetic & optical media..	3	24	8	f	D	D	D	D	D	D	D	D
33461	Mfg & reproducing magnetic & optical media.....	3	24	8	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg.....	1	74	24	2 000	69 001	1 097	2 001	24 344	245 398	149 005	394 108	D
3352	Household appliance mfg..	—	3	2	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg.....	—	2	1	e	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg...	—	2	1	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg—Con.												
3353	Electrical equipment mfg ..	4	36	12	715	24 999	377	716	9 375	68 803	59 157	126 573	D
33531	Electrical equipment mfg .....	4	36	12	715	24 999	377	716	9 375	68 803	59 157	126 573	D
335314	Relay & industrial control mfg .....	3	21	8	475	16 848	213	404	4 613	47 217	37 718	84 735	D
3359	Other electrical equipment & component mfg .....	—	23	8	f	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg .....	1	13	5	e	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg .....	1	13	5	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	3	246	88	l	D	D	D	D	D	D	D	292 718
3361	Motor vehicle mfg .....	—	4	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	—	1	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	—	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	2	50	13	g	D	D	D	D	D	D	D	6 614
33632	Motor vehicle electrical & electronic equipment mfg .....	7	14	6	e	D	D	D	D	D	D	D	1 381
336322	Other motor vehicle electrical & electronic equipment mfg .....	7	13	6	e	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	—	10	2	f	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	3	96	44	l	D	D	D	D	D	D	D	262 550
33641	Aerospace product & parts mfg .....	3	96	44	l	D	D	D	D	D	D	D	262 550
336411	Aircraft mfg .....	3	5	4	l	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	—	83	36	j	D	D	D	D	D	D	D	D
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	—	67	22	3 883	148 221	2 774	5 506	85 860	215 722	135 191	355 789	19 982
33661	Ship & boat building ....	—	67	22	3 883	148 221	2 774	5 506	85 860	215 722	135 191	355 789	19 982
336611	Ship building & repairing .....	—	36	15	2 533	100 678	1 800	4 024	67 170	175 024	99 709	274 733	D
336612	Boat building .....	1	31	7	1 350	47 543	974	1 482	18 690	40 698	35 482	81 056	D
3369	Other transportation equipment mfg .....	—	16	3	e	D	D	D	D	D	D	D	872
33699	Other transportation equipment mfg .....	—	16	3	e	D	D	D	D	D	D	D	872
336991	Motorcycle, bicycle, & parts mfg .....	—	14	2	e	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	1	230	52	4 030	102 681	3 238	6 261	69 568	220 490	160 595	380 711	11 276
3371	Household & institutional furniture & kitchen cabinet mfg .....	2	159	25	2 072	49 480	1 681	3 168	35 092	95 662	74 761	169 833	4 214
33711	Wood kitchen cabinet & counter top mfg .....	1	94	14	1 250	31 300	1 001	1 957	21 603	61 285	42 472	103 236	2 059
337110	Wood kitchen cabinet & counter top mfg ...	1	94	14	1 250	31 300	1 001	1 957	21 603	61 285	42 472	103 236	2 059
33712	Household & institutional furniture mfg .....	2	65	11	822	18 180	680	1 211	13 489	34 377	32 289	66 597	2 155
337122	Nonupholstered wood household furniture mfg .....	4	32	5	296	5 723	267	489	4 660	11 439	9 074	20 625	D
337127	Institutional furniture mfg .....	1	16	4	392	9 546	307	516	6 630	17 452	16 735	34 021	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Seattle-Bellevue-Everett, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
337	Furniture & related product mfg—Con.												
3372	Office furniture (including fixtures) mfg . . . . .	1	60	24	1 608	44 563	1 293	2 582	28 533	90 888	56 093	147 260	5 312
33721	Office furniture (including fixtures) mfg . . . . .	1	60	24	1 608	44 563	1 293	2 582	28 533	90 888	56 093	147 260	5 312
337211	Wood office furniture mfg . . . . .	—	20	10	847	20 153	722	1 407	14 116	44 088	24 660	69 270	2 555
337212	Custom architectural woodwork & millwork mfg . . . . .	1	13	6	e	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, & locker mfg . . . . .	3	22	6	300	9 127	229	458	5 491	16 811	10 617	27 220	847
3379	Other furniture related product mfg . . . . .	2	11	3	350	8 638	264	511	5 943	33 940	29 741	63 618	1 750
33791	Mattress mfg . . . . .	2	9	3	e	D	D	D	D	D	D	D	D
337910	Mattress mfg . . . . .	2	9	3	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	2	442	65	6 409	197 455	4 326	7 852	100 237	511 035	344 863	843 988	35 753
3391	Medical equipment & supplies mfg . . . . .	3	192	24	2 202	82 587	1 386	2 349	36 862	192 311	99 520	292 972	13 308
33911	Medical equipment & supplies mfg . . . . .	3	192	24	2 202	82 587	1 386	2 349	36 862	192 311	99 520	292 972	13 308
339112	Surgical & medical instrument mfg . . . . .	2	22	6	796	40 436	393	706	14 512	101 674	54 270	155 840	8 906
339113	Surgical appliance & supplies mfg . . . . .	4	21	5	399	12 745	256	438	5 548	33 337	17 543	51 124	1 722
339116	Dental laboratories . . . . .	4	124	8	708	19 284	538	827	12 094	37 683	14 624	53 330	1 460
3399	Other miscellaneous mfg . . . . .	2	250	41	4 207	114 868	2 940	5 503	63 375	318 724	245 343	551 016	22 445
33992	Sporting & athletic goods mfg . . . . .	1	53	17	2 433	66 387	1 722	3 356	37 638	219 756	179 307	388 853	18 015
339920	Sporting & athletic goods mfg . . . . .	1	53	17	2 433	66 387	1 722	3 356	37 638	219 756	179 307	388 853	18 015
33995	Sign mfg . . . . .	3	82	9	739	21 457	479	839	10 498	39 479	22 338	61 647	1 396
339950	Sign mfg . . . . .	3	82	9	739	21 457	479	839	10 498	39 479	22 338	61 647	1 396
33999	All other miscellaneous mfg . . . . .	4	49	9	562	14 674	406	765	8 421	31 936	23 845	53 512	2 074
339999	All other miscellaneous mfg . . . . .	4	33	7	386	8 946	286	536	5 520	19 660	18 041	35 382	1 583
	<b>Tacoma, WA PMSA</b>												
<b>31-33</b>	<b>Manufacturing . . . . .</b>	<b>1</b>	<b>680</b>	<b>208</b>	<b>22 283</b>	<b>705 185</b>	<b>16 834</b>	<b>34 233</b>	<b>479 523</b>	<b>1 882 247</b>	<b>2 409 154</b>	<b>4 275 910</b>	<b>194 835</b>
311	Food mfg . . . . .	1	52	19	2 002	54 761	1 493	3 254	38 574	296 706	385 234	683 756	16 478
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	—	4	2	e	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
311422	Specialty canning . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3116	Meat product mfg . . . . .	7	9	3	319	8 114	258	596	6 042	38 569	55 263	95 240	1 689
31161	Animal slaughtering & processing . . . . .	7	9	3	319	8 114	258	596	6 042	38 569	55 263	95 240	1 689
3117	Seafood product preparation & packaging . . . . .	—	6	5	397	9 498	260	584	5 600	25 950	24 155	50 106	944
31171	Seafood product preparation & packaging . . . . .	—	6	5	397	9 498	260	584	5 600	25 950	24 155	50 106	944
311712	Fresh & frozen seafood processing . . . . .	—	5	4	e	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg . . . . .	2	15	5	390	9 545	277	499	5 513	23 306	27 629	50 560	2 604
31182	Cookie, cracker, & pasta mfg . . . . .	4	3	2	268	6 315	209	355	3 964	12 332	16 228	28 773	D
311821	Cookie & cracker mfg . . . . .	4	2	2	e	D	D	D	D	D	D	D	D
315	Apparel mfg . . . . .	—	17	9	830	21 575	766	1 560	16 887	43 168	76 684	116 940	D
3152	Cut & sew apparel mfg . . . . .	—	14	7	f	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors . . . . .	1	10	5	e	D	D	D	D	D	D	D	D
315211	Men's & boys' cut & sew apparel contractors . . . . .	—	4	4	355	6 777	346	683	6 325	8 418	1 558	9 954	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Tacoma, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
321	Wood product mfg . . . . .	—	73	31	3 248	89 647	2 649	5 476	66 395	174 175	412 161	592 002	13 178
3211	Sawmills & wood preservation . . . . .	—	15	12	1 435	44 649	1 127	2 403	31 672	101 989	269 214	373 421	6 670
32111	Sawmills & wood preservation . . . . .	—	15	12	1 435	44 649	1 127	2 403	31 672	101 989	269 214	373 421	6 670
321113	Sawmills . . . . .	—	12	9	1 168	36 758	882	1 910	24 933	65 697	201 545	267 906	6 428
321114	Wood preservation . . . . .	—	3	3	267	7 891	245	493	6 739	36 292	67 669	105 515	242
3212	Veneer, plywood, & engineered wood product mfg . . . . .	—	11	8	709	19 975	562	1 231	15 348	24 225	73 772	101 830	3 987
32121	Veneer, plywood, & engineered wood product mfg . . . . .	—	11	8	709	19 975	562	1 231	15 348	24 225	73 772	101 830	3 987
321219	Reconstituted wood product mfg . . . . .	—	3	2	266	7 518	215	448	5 754	9 253	40 625	49 220	D
3219	Other wood product mfg . . . . .	1	47	11	1 104	25 023	960	1 842	19 375	47 961	69 175	116 751	2 521
32191	Millwork . . . . .	1	26	8	769	18 379	674	1 325	14 910	33 680	50 312	83 977	1 794
321911	Wood window & door mfg . . . . .	—	12	4	523	11 972	467	920	10 004	21 742	28 369	49 780	927
322	Paper mfg . . . . .	—	17	11	1 378	60 801	1 046	2 165	43 877	197 888	244 424	444 702	31 490
3221	Pulp, paper, & paperboard mills . . . . .	—	4	4	918	46 494	706	1 418	33 839	158 354	184 803	345 162	22 588
32212	Paper mills . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
322122	Newsprint mills . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
32213	Paperboard mills . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
322130	Paperboard mills . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg . . . . .	—	13	7	460	14 307	340	747	10 038	39 534	59 621	99 540	8 902
32221	Paperboard container mfg . . . . .	—	3	3	251	7 717	185	418	5 872	19 018	26 112	45 649	D
323	Printing & related support activities . . . . .	1	65	12	1 431	40 575	824	1 247	18 198	67 287	52 009	121 432	4 885
3231	Printing & related support activities . . . . .	1	65	12	1 431	40 575	824	1 247	18 198	67 287	52 009	121 432	4 885
32311	Printing . . . . .	1	60	12	1 410	39 942	805	1 214	17 716	65 607	51 688	119 400	4 628
323110	Commercial lithographic printing . . . . .	—	31	6	462	17 827	238	454	6 399	31 120	16 936	48 464	3 242
323117	Book printing . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
324	Petroleum & coal products mfg . . . . .	1	6	4	428	17 706	222	493	8 846	76 799	344 595	420 141	6 157
3241	Petroleum & coal products mfg . . . . .	1	6	4	428	17 706	222	493	8 846	76 799	344 595	420 141	6 157
325	Chemical mfg . . . . .	—	16	7	549	22 087	302	606	11 562	89 568	90 920	180 748	6 395
3251	Basic chemical mfg . . . . .	—	8	3	259	14 026	175	376	8 332	56 932	43 715	100 876	5 176
326	Plastics & rubber products mfg . . . . .	3	37	15	1 563	43 201	1 283	2 652	31 930	109 511	129 872	238 453	26 858
3261	Plastics product mfg . . . . .	3	34	15	1 523	41 845	1 251	2 585	30 888	106 970	128 240	234 212	D
32619	Other plastics product mfg . . . . .	4	24	9	1 094	28 102	911	1 726	20 619	63 174	57 622	119 594	10 577
326199	All other plastics product mfg . . . . .	4	21	9	1 068	27 451	894	1 685	20 199	62 478	56 390	117 685	10 551
327	Nonmetallic mineral product mfg . . . . .	—	40	21	1 474	48 590	1 171	2 455	33 783	138 047	104 470	241 542	9 839
3272	Glass & glass product mfg . . . . .	—	5	4	438	10 430	347	686	7 214	27 315	23 106	50 336	D
32721	Glass & glass product mfg . . . . .	—	5	4	438	10 430	347	686	7 214	27 315	23 106	50 336	D
327215	Glass product mfg made of purchased glass . . . . .	—	5	4	438	10 430	347	686	7 214	27 315	23 106	50 336	D
3273	Cement & concrete product mfg . . . . .	1	19	11	723	26 328	581	1 281	18 355	65 795	42 541	107 572	5 743
32732	Ready-mix concrete mfg . . . . .	—	8	5	e	D	D	D	D	D	D	D	D
327320	Ready-mix concrete mfg . . . . .	—	8	5	e	D	D	D	D	D	D	D	D
32739	Other concrete product mfg . . . . .	2	9	5	393	12 723	292	620	8 328	32 598	21 766	53 711	3 517
327390	Other concrete product mfg . . . . .	2	9	5	393	12 723	292	620	8 328	32 598	21 766	53 711	3 517

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>												
	<b>Tacoma, WA PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg .....	—	7	3	968	34 510	866	1 868	27 653	92 079	105 808	196 918	D
3313	Alumina & aluminum production & processing ..	—	1	1	e	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	—	1	1	e	D	D	D	D	D	D	D	D
331319	Other aluminum rolling & drawing .....	—	1	1	e	D	D	D	D	D	D	D	D
3315	Foundries .....	—	5	2	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .	—	2	1	e	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment) .....	—	2	1	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	1	3	1	e	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	—	1	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	94	21	2 108	69 896	1 645	3 251	47 173	141 377	135 807	274 698	9 993
3323	Architectural & structural metals mfg .....	—	31	12	1 156	36 352	894	1 814	23 532	76 794	101 487	177 156	3 872
33232	Ornamental & architectural metal products mfg .....	—	17	9	1 020	31 781	799	1 641	20 975	66 954	89 264	155 198	3 585
332321	Metal window & door mfg .....	—	4	2	f	D	D	D	D	D	D	D	D
332322	Sheet metal work mfg .	1	8	5	387	13 407	319	689	9 247	28 942	32 859	60 393	2 844
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	2	37	2	315	10 719	260	514	7 799	21 300	9 827	29 765	1 907
33271	Machine shops .....	2	37	2	315	10 719	260	514	7 799	21 300	9 827	29 765	1 907
332710	Machine shops .....	2	37	2	315	10 719	260	514	7 799	21 300	9 827	29 765	1 907
3329	Other fabricated metal product mfg .....	—	12	2	250	9 393	209	390	7 611	19 418	12 607	32 121	559
333	Machinery mfg .....	1	35	6	819	27 602	594	1 205	17 848	66 525	42 989	107 874	2 732
3332	Industrial machinery mfg ..	—	6	2	439	15 057	306	640	8 696	39 174	22 195	59 080	1 023
334	Computer & electronic product mfg .....	3	22	4	609	26 692	293	607	12 252	31 399	30 698	68 605	D
3344	Semiconductor & other electronic component mfg .....	—	3	1	e	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	—	3	1	e	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	—	1	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	—	39	15	g	D	D	D	D	D	D	D	5 328
3363	Motor vehicle parts mfg ...	—	9	3	e	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	—	14	4	1 582	53 089	1 221	2 637	43 762	176 771	64 066	214 320	1 756
33641	Aerospace product & parts mfg .....	—	14	4	1 582	53 089	1 221	2 637	43 762	176 771	64 066	214 320	1 756
336413	Other aircraft part & auxiliary equipment mfg .....	—	10	4	g	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	2	13	7	f	D	D	D	D	D	D	D	664
33661	Ship & boat building ....	2	13	7	f	D	D	D	D	D	D	D	664
336611	Ship building & repairing .....	4	8	3	e	D	D	D	D	D	D	D	523
337	Furniture & related product mfg .....	1	54	19	1 414	40 818	1 104	2 241	26 865	77 579	63 791	144 882	2 454
3371	Household & institutional furniture & kitchen cabinet mfg .....	2	35	9	801	19 256	646	1 320	13 408	38 942	25 165	63 755	D
33711	Wood kitchen cabinet & counter top mfg .....	1	21	6	443	9 888	362	759	6 759	16 938	10 460	27 398	D
337110	Wood kitchen cabinet & counter top mfg ...	1	21	6	443	9 888	362	759	6 759	16 938	10 460	27 398	D
33712	Household & institutional furniture mfg .....	2	14	3	358	9 368	284	561	6 649	22 004	14 705	36 357	D
337127	Institutional furniture mfg .....	2	5	2	258	7 657	193	397	5 248	17 862	9 921	27 570	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>SEATTLE-TACOMA-BREMERTON, WA CMSA—Con.</b>													
	<b>Tacoma, WA PMSA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>													
337	Furniture & related product mfg—Con.													
3372	Office furniture (including fixtures) mfg .....	—	15	8	e	D	D	D	D	D	D	D	D	
33721	Office furniture (including fixtures) mfg .....	—	15	8	e	D	D	D	D	D	D	D	D	
337215	Showcase, partition, shelving, & locker mfg .....	—	7	4		303	10 674	216	448	6 979	11 712	15 929	31 328	610
339	Miscellaneous mfg.....	5	78	6		561	14 558	402	727	8 432	33 559	17 366	50 880	1 525
3399	Other miscellaneous mfg ..	5	43	5		424	10 448	316	591	6 627	24 033	13 203	37 066	1 239
	<b>SPOKANE, WA MSA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>572</b>	<b>176</b>		<b>20 892</b>	<b>681 396</b>	<b>14 631</b>	<b>28 708</b>	<b>406 848</b>	<b>1 811 208</b>	<b>2 181 124</b>	<b>3 994 582</b>	<b>155 683</b>
311	Food mfg.....	1	48	20		1 585	46 714	829	1 484	20 844	136 006	178 897	314 480	12 137
3115	Dairy product mfg .....	—	5	3	e		D	D	D	D	D	D	D	57
31151	Dairy product (except frozen) mfg .....	—	3	3		342	6 675	101	136	3 051	21 814	23 482	45 263	D
311511	Fluid milk mfg .....	—	3	3		342	6 675	101	136	3 051	21 814	23 482	45 263	D
3118	Bakeries & tortilla mfg .....	—	18	9		784	27 148	405	731	10 668	65 791	47 395	112 772	1 984
31181	Bread & bakery product mfg .....	—	14	6		685	24 587	339	593	8 947	59 185	30 088	89 010	1 607
311812	Commercial bakeries ..	—	9	5		636	23 728	300	517	8 395	57 162	27 054	84 208	1 579
315	Apparel mfg .....	—	9	5		351	4 838	322	576	3 952	7 813	2 412	10 225	D
3152	Cut & sew apparel mfg ....	—	8	5	e		D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors .....	—	5	3	e		D	D	D	D	D	D	D	D
315211	Men's & boys' cut & sew apparel contractors .....	—	3	3		256	3 543	235	413	2 776	5 488	944	6 435	D
321	Wood product mfg .....	1	27	8		840	16 837	726	1 362	14 331	44 007	86 060	129 444	D
3219	Other wood product mfg ...	—	18	4		610	12 777	569	1 078	11 713	35 572	69 520	104 489	D
32191	Millwork .....	—	7	3		458	9 498	433	836	8 783	27 404	37 061	65 526	D
321912	Cut stock, resawing lumber, & planing....	—	3	2		407	8 457	390	761	7 995	25 118	33 932	60 093	D
322	Paper mfg .....	—	7	7		332	12 834	233	500	7 742	37 858	38 910	76 915	D
323	Printing & related support activities.....	2	75	10		756	18 174	515	836	10 718	42 069	19 127	61 130	3 534
3231	Printing & related support activities.....	2	75	10		756	18 174	515	836	10 718	42 069	19 127	61 130	3 534
32311	Printing .....	2	65	10		719	17 374	484	788	10 108	40 390	18 745	59 071	3 446
323110	Commercial lithographic printing ..	1	33	5		421	11 300	264	445	6 174	26 856	9 213	36 032	2 557
325	Chemical mfg .....	2	16	9		618	21 414	330	1 099	10 551	52 437	74 602	131 345	4 333
3254	Pharmaceutical & medicine mfg .....	—	5	4	e		D	D	D	D	D	D	D	D
32541	Pharmaceutical & medicine mfg .....	—	5	4	e		D	D	D	D	D	D	D	D
325414	Biological product (except diagnostic) mfg .....	—	5	4	e		D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	—	19	9		928	22 513	706	1 450	14 258	51 807	37 806	89 372	2 791
3261	Plastics product mfg .....	—	15	9		889	21 686	672	1 388	13 567	49 365	35 629	84 631	2 671
32619	Other plastics product mfg .....	—	12	8		824	20 015	620	1 287	12 329	45 724	32 696	78 063	D
326199	All other plastics product mfg .....	—	10	8	f		D	D	D	D	D	D	D	2 458
327	Nonmetallic mineral product mfg .....	1	22	11		711	21 876	529	1 110	13 785	63 376	51 779	114 302	5 164
3273	Cement & concrete product mfg .....	1	15	8		492	16 511	360	777	10 467	51 204	41 426	91 957	3 268
32739	Other concrete product mfg .....	—	6	3		305	10 637	237	502	7 014	25 973	22 215	47 622	2 060
327390	Other concrete product mfg .....	—	6	3		305	10 637	237	502	7 014	25 973	22 215	47 622	2 060

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SPOKANE, WA MSA— Con. Manufacturing— Con.</b>												
331	Primary metal mfg . . . . .	—	12	10	3 948	173 930	3 155	6 708	121 818	610 865	895 159	1 516 154	68 854
3313	Alumina & aluminum production & processing . . . . .	—	2	2	h	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing . . . . .	—	2	2	h	D	D	D	D	D	D	D	D
331312	Primary aluminum production . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
331315	Aluminum sheet, plate, & foil mfg . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	8	7	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	1	5	5	291	8 260	192	372	4 451	15 910	9 033	24 822	D
331511	Iron foundries . . . . .	1	4	4	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	111	29	1 839	52 876	1 403	2 540	33 551	112 299	101 364	212 779	8 473
3323	Architectural & structural metals mfg . . . . .	1	43	16	1 077	31 045	790	1 445	18 375	69 157	79 240	147 997	3 817
33231	Plate work & fabricated structural product mfg . . . . .	—	18	6	388	12 420	266	489	6 685	23 339	22 120	45 362	857
33232	Ornamental & architectural metal products mfg . . . . .	1	25	10	689	18 625	524	956	11 690	45 818	57 120	102 635	2 960
332322	Sheet metal work mfg . . . . .	—	17	9	616	16 709	474	859	10 555	41 938	53 060	94 671	2 830
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	41	5	e	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	1	38	4	287	8 985	211	337	5 635	16 256	8 386	24 527	1 809
332710	Machine shops . . . . .	1	38	4	287	8 985	211	337	5 635	16 256	8 386	24 527	1 809
333	Machinery mfg . . . . .	1	41	9	1 287	42 893	897	1 646	25 244	79 695	51 384	132 825	2 958
3335	Metalworking machinery mfg . . . . .	1	11	4	407	13 017	278	553	7 801	21 162	13 027	34 834	1 053
33351	Metalworking machinery mfg . . . . .	1	11	4	407	13 017	278	553	7 801	21 162	13 027	34 834	1 053
333513	Machine tool (metal forming types) mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg . . . . .	—	11	3	644	23 534	443	794	13 320	39 561	24 482	64 900	995
33392	Material handling equipment mfg . . . . .	—	4	2	e	D	D	D	D	D	D	D	727
333922	Conveyor & conveying equipment mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg . . . . .	—	27	14	3 632	128 442	1 997	3 692	57 161	360 522	380 315	728 524	D
3341	Computer & peripheral equipment mfg . . . . .	1	8	4	1 753	55 828	852	1 740	23 656	130 315	180 764	307 885	D
33411	Computer & peripheral equipment mfg . . . . .	1	8	4	1 753	55 828	852	1 740	23 656	130 315	180 764	307 885	D
334111	Electronic computer mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg . . . . .	2	6	3	g	D	D	D	D	D	D	D	D
3342	Communications equipment mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	—	10	4	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	—	10	4	g	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg . . . . .	—	3	1	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SPOKANE, WA MSA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg .....	2	8	4	722	21 145	511	1 044	12 413	43 455	39 936	83 275	D
3351	Electric lighting equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg ...	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	2	40	15	g	D	D	D	D	D	D	D	4 549
3362	Motor vehicle body & trailer mfg .....	—	8	3	e	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg .....	—	8	3	e	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	6	17	9	f	D	D	D	D	D	D	D	2 792
3364	Aerospace product & parts mfg .....	1	7	2	617	27 124	478	885	19 557	25 566	26 966	52 277	560
33641	Aerospace product & parts mfg .....	1	7	2	617	27 124	478	885	19 557	25 566	26 966	52 277	560
336413	Other aircraft part & auxiliary equipment mfg .....	1	6	2	f	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	—	5	1	e	D	D	D	D	D	D	D	D
33661	Ship & boat building .....	—	5	1	e	D	D	D	D	D	D	D	D
336612	Boat building .....	—	4	1	e	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	1	31	4	620	12 781	474	881	7 909	24 053	21 772	46 003	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	1	22	3	516	10 365	415	770	6 478	17 906	16 710	34 722	D
33711	Wood kitchen cabinet & counter top mfg .....	—	13	1	393	7 696	318	591	4 765	13 120	11 970	25 308	D
337110	Wood kitchen cabinet & counter top mfg ...	—	13	1	393	7 696	318	591	4 765	13 120	11 970	25 308	D
339	Miscellaneous mfg .....	3	60	8	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	2	37	6	e	D	D	D	D	D	D	D	641
<b>YAKIMA, WA MSA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>239</b>	<b>89</b>	<b>10 163</b>	<b>264 561</b>	<b>8 183</b>	<b>15 635</b>	<b>186 897</b>	<b>761 968</b>	<b>1 332 210</b>	<b>2 090 544</b>	<b>89 956</b>
311	Food mfg .....	—	36	22	3 281	76 005	2 911	5 425	58 753	297 921	678 328	977 631	36 770
3114	Fruit & vegetable preserving & specialty food mfg .....	—	22	16	2 394	55 496	2 162	3 981	43 111	186 931	329 377	518 145	D
31142	Fruit & vegetable canning, pickling, & drying .....	—	20	14	g	D	D	D	D	D	D	D	12 584
311421	Fruit & vegetable canning .....	—	17	12	g	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	—	3	3	f	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	—	3	3	f	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg .....	—	11	5	268	6 549	134	246	2 990	44 165	52 135	94 616	2 998
3121	Beverage mfg .....	—	11	5	268	6 549	134	246	2 990	44 165	52 135	94 616	2 998
321	Wood product mfg .....	—	25	13	1 525	39 503	1 351	2 636	30 912	88 581	196 592	282 878	11 870
3212	Veneer, plywood, & engineered wood product mfg .....	—	5	3	298	9 838	261	519	7 937	30 357	47 479	76 345	D
32121	Veneer, plywood, & engineered wood product mfg .....	—	5	3	298	9 838	261	519	7 937	30 357	47 479	76 345	D
3219	Other wood product mfg ...	—	16	8	f	D	D	D	D	D	D	D	D
32191	Millwork .....	—	6	4	f	D	D	D	D	D	D	D	D
321918	Other millwork (including flooring) ...	—	2	1	e	D	D	D	D	D	D	D	D
322	Paper mfg .....	—	5	4	351	13 929	273	601	10 176	34 900	84 220	120 260	9 201
3222	Converted paper product mfg .....	—	5	4	351	13 929	273	601	10 176	34 900	84 220	120 260	9 201
32221	Paperboard container mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
322211	Corrugated & solid fiber box mfg .....	—	2	2	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>YAKIMA, WA MSA— Con. Manufacturing— Con.</b>												
326	Plastics & rubber products mfg .....	1	15	10	1 403	41 794	1 118	2 271	26 986	100 003	146 788	246 770	16 248
3261	Plastics product mfg .....	1	15	10	1 403	41 794	1 118	2 271	26 986	100 003	146 788	246 770	16 248
32611	Unsupported plastics film, sheet, & bag mfg ..	—	1	1	e	D	D	D	D	D	D	D	D
326111	Unsupported plastics bag mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	3	7	5	589	17 890	445	880	9 953	37 901	37 384	75 594	3 211
326199	All other plastics product mfg .....	3	7	5	589	17 890	445	880	9 953	37 901	37 384	75 594	3 211
332	Fabricated metal product mfg .....	—	33	9	909	26 979	605	1 102	18 619	60 187	51 924	109 747	3 199
3323	Architectural & structural metals mfg .....	—	9	4	301	6 461	228	348	4 482	14 069	13 432	27 300	528
3329	Other fabricated metal product mfg .....	—	6	2	348	13 016	176	347	8 557	27 455	11 632	38 128	D
33291	Metal valve mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
333	Machinery mfg .....	6	33	6	779	19 645	483	727	10 310	44 186	41 492	87 116	3 949
3332	Industrial machinery mfg ..	9	4	1	e	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg .....	9	1	1	e	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg .....	9	1	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	—	6	3	f	D	D	D	D	D	D	D	801
3362	Motor vehicle body & trailer mfg .....	—	4	3	e	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg .....	—	4	3	e	D	D	D	D	D	D	D	D
336214	Travel trailer & camper mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	1	27	6	516	10 363	341	608	6 377	27 942	17 951	46 211	2 376
3399	Other miscellaneous mfg ..	1	16	5	463	9 171	296	531	5 551	25 542	15 975	41 816	2 305

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Industries with 250 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 250 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c–100 to 249 employees; e–250 to 499 employees; f–500 to 999 employees; g–1,000 to 2,499 employees; h–2,500 to 4,999 employees; i–5,000 to 9,999 employees; j–10,000 to 24,999 employees; k–25,000 to 49,999 employees; l–50,000 to 99,999 employees; m–100,000 employees or more.

**Table 3. Industry Statistics for Counties: 1997**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>ADAMS COUNTY, WA Manufacturing .....</b>	<b>5</b>	<b>13</b>	<b>2</b>	<b>1 088</b>	<b>25 924</b>	<b>967</b>	<b>2 057</b>	<b>20 521</b>	<b>127 582</b>	<b>147 070</b>	<b>274 743</b>	<b>D</b>
311	Food mfg .....	5	6	2	1 065	25 500	947	2 031	20 145	126 113	146 082	272 264	D
3114	Fruit & vegetable preserving & specialty food mfg .....	5	3	2	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	5	3	2	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg .....	5	3	2	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>BENTON COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>121</b>	<b>24</b>	<b>3 672</b>	<b>139 525</b>	<b>2 634</b>	<b>5 504</b>	<b>78 890</b>	<b>425 151</b>	<b>462 665</b>	<b>885 455</b>	<b>49 398</b>
311	Food mfg .....	-	16	7	g	D	D	D	D	D	D	D	27 279
3114	Fruit & vegetable preserving & specialty food mfg .....	-	5	5	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	4	4	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg .....	-	4	4	g	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
3251	Basic chemical mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
32518	Other basic inorganic chemical mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>CHELAN COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>88</b>	<b>23</b>	<b>2 535</b>	<b>76 215</b>	<b>2 066</b>	<b>3 850</b>	<b>55 046</b>	<b>195 073</b>	<b>345 824</b>	<b>552 162</b>	<b>25 606</b>
331	Primary metal mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	2	2	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	2	2	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>CLALLAM COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>75</b>	<b>15</b>	<b>1 481</b>	<b>48 991</b>	<b>1 184</b>	<b>2 330</b>	<b>37 807</b>	<b>150 950</b>	<b>195 781</b>	<b>359 236</b>	<b>9 266</b>
321	Wood product mfg .....	3	24	4	507	11 802	450	906	10 165	35 924	78 451	112 932	4 474
<b>CLARK COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>421</b>	<b>131</b>	<b>19 537</b>	<b>715 232</b>	<b>15 316</b>	<b>30 133</b>	<b>489 358</b>	<b>1 985 441</b>	<b>1 906 135</b>	<b>3 854 312</b>	<b>514 319</b>
311	Food mfg .....	-	20	6	1 022	40 927	830	1 834	23 245	162 503	191 591	353 193	15 968
3119	Other food mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
31191	Snack food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311919	Other snack food mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
315	Apparel mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg ..	-	4	3	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	1	36	14	839	22 791	644	1 260	14 169	52 052	109 223	163 543	2 022
322	Paper mfg .....	-	12	10	2 499	88 468	2 149	4 056	67 831	385 829	354 509	734 924	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	g	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	11	9	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	1	22	15	1 064	30 108	698	1 400	18 238	62 829	65 646	130 884	7 592
3261	Plastics product mfg .....	1	21	15	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	12	9	766	21 872	479	965	12 320	47 111	31 766	78 276	D
326199	All other plastics product mfg .....	-	12	9	766	21 872	479	965	12 320	47 111	31 766	78 276	D
331	Primary metal mfg .....	-	6	5	776	31 817	660	1 361	22 514	101 703	131 421	228 268	D
3313	Alumina & aluminum production & processing ..	-	3	3	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	3	3	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	78	19	1 512	44 944	1 152	2 140	30 659	85 688	65 878	150 500	5 398
3323	Architectural & structural metals mfg .....	1	25	10	546	17 779	405	748	11 875	33 441	27 324	59 930	1 451
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	42	4	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	-	40	3	509	13 576	379	626	9 067	25 586	9 652	35 236	2 380
332710	Machine shops .....	-	40	3	509	13 576	379	626	9 067	25 586	9 652	35 236	2 380

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CLARK COUNTY, WA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg . . . . .	-	45	12	1 312	48 341	738	1 320	21 740	86 246	86 247	176 391	7 205
3332	Industrial machinery mfg ..	-	10	4	606	24 542	322	549	11 677	30 018	52 568	84 247	D
33329	Other industrial machinery mfg . . . . .	-	7	4	595	24 223	316	540	11 512	29 315	51 993	82 965	D
334	Computer & electronic product mfg . . . . .	-	29	13	7 013	302 509	5 855	11 784	228 406	759 249	613 046	1 344 308	378 258
3341	Computer & peripheral equipment mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg . . . . .	-	12	8	3 426	125 310	2 794	5 832	85 854	377 223	374 419	739 642	D
33441	Semiconductor & other electronic component mfg . . . . .	-	12	8	3 426	125 310	2 794	5 832	85 854	377 223	374 419	739 642	D
334413	Semiconductor & related device mfg ...	-	6	5	g	D	D	D	D	D	D	D	D
334414	Electronic capacitor mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>COWLITZ COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>125</b>	<b>46</b>	<b>8 309</b>	<b>364 426</b>	<b>6 330</b>	<b>12 779</b>	<b>263 394</b>	<b>1 051 539</b>	<b>1 442 009</b>	<b>2 496 527</b>	<b>180 335</b>
321	Wood product mfg . . . . .	-	25	12	1 858	62 178	1 646	3 240	50 719	114 920	273 027	381 521	23 334
3211	Sawmills & wood preservation . . . . .	-	14	8	1 335	50 234	1 198	2 540	42 593	89 648	242 351	325 185	22 952
32111	Sawmills & wood preservation . . . . .	-	14	8	1 335	50 234	1 198	2 540	42 593	89 648	242 351	325 185	22 952
321113	Sawmills . . . . .	-	14	8	1 335	50 234	1 198	2 540	42 593	89 648	242 351	325 185	22 952
3219	Other wood product mfg ...	-	10	4	f	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	-	9	9	h	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	-	4	4	h	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
322122	Newsprint mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills . . . . .	-	2	2	h	D	D	D	D	D	D	D	D
322130	Paperboard mills . . . . .	-	2	2	h	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	1	1	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing ..	-	1	1	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>FRANKLIN COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>47</b>	<b>7</b>	<b>3 092</b>	<b>69 069</b>	<b>2 668</b>	<b>5 480</b>	<b>55 438</b>	<b>221 514</b>	<b>945 835</b>	<b>1 160 501</b>	<b>15 849</b>
311	Food mfg . . . . .	-	10	4	h	D	D	D	D	D	D	D	14 541
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	3	3	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg . . . . .	-	3	3	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg . . . . .	-	3	3	g	D	D	D	D	D	D	D	D
3116	Meat product mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
<b>GRANT COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>56</b>	<b>22</b>	<b>4 090</b>	<b>111 290</b>	<b>3 276</b>	<b>6 408</b>	<b>78 230</b>	<b>438 256</b>	<b>370 000</b>	<b>806 938</b>	<b>44 347</b>
311	Food mfg . . . . .	-	18	10	2 648	65 814	2 311	4 397	50 756	251 450	241 816	495 852	14 652
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	7	7	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg . . . . .	-	5	5	2 036	49 103	1 805	3 299	38 885	203 026	167 074	373 544	11 687
311411	Frozen fruit, juice, & vegetable mfg . . . . .	-	5	5	2 036	49 103	1 805	3 299	38 885	203 026	167 074	373 544	11 687
331	Primary metal mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>GRAYS HARBOR COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>97</b>	<b>27</b>	<b>3 792</b>	<b>125 741</b>	<b>3 164</b>	<b>5 911</b>	<b>96 722</b>	<b>337 800</b>	<b>492 226</b>	<b>822 851</b>	<b>22 419</b>
321	Wood product mfg .....	1	45	12	1 420	44 832	1 266	2 514	36 836	104 862	225 970	325 554	7 490
3211	Sawmills & wood preservation .....	1	28	5	545	18 581	476	920	14 793	51 254	111 307	158 357	4 256
32111	Sawmills & wood preservation .....	1	28	5	545	18 581	476	920	14 793	51 254	111 307	158 357	4 256
321113	Sawmills .....	1	28	5	545	18 581	476	920	14 793	51 254	111 307	158 357	4 256
3219	Other wood product mfg ...	1	14	4	567	16 663	517	997	14 114	36 104	59 334	95 426	D
32191	Millwork .....	1	8	3	526	16 007	480	924	13 537	34 708	58 617	93 423	D
322	Paper mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	1	6	3	553	21 875	401	757	16 339	25 407	45 545	69 224	D
3339	Other general-purpose machinery mfg .....	1	4	3	f	D	D	D	D	D	D	D	D
<b>ISLAND COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>49</b>	<b>5</b>	<b>625</b>	<b>16 961</b>	<b>494</b>	<b>943</b>	<b>12 136</b>	<b>32 673</b>	<b>30 091</b>	<b>62 524</b>	<b>1 960</b>
<b>JEFFERSON COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>56</b>	<b>9</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>12 203</b>
<b>KING COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>4</b>	<b>2 993</b>	<b>826</b>	<b>134 028</b>	<b>5 682 613</b>	<b>75 310</b>	<b>143 453</b>	<b>2 515 485</b>	<b>10 459 875</b>	<b>16 073 824</b>	<b>26 480 337</b>	<b>725 700</b>
311	Food mfg .....	2	294	110	j	D	D	D	D	D	D	D	D
3115	Dairy product mfg .....	3	16	10	g	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) mfg .....	2	10	6	f	D	D	D	D	D	D	D	D
311511	Fluid milk mfg .....	3	7	5	f	D	D	D	D	D	D	D	4 697
3116	Meat product mfg .....	5	16	9	g	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	5	16	9	g	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	3	14	7	f	D	D	D	D	D	D	D	D
3117	Seafood product preparation & packaging ..	2	54	35	h	D	D	D	D	D	D	D	D
31171	Seafood product preparation & packaging ..	2	54	35	h	D	D	D	D	D	D	D	D
311712	Fresh & frozen seafood processing ..	2	44	34	h	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	1	126	30	4 708	133 308	2 353	4 753	64 288	390 638	313 460	702 486	D
31181	Bread & bakery product mfg .....	2	104	22	h	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	3	43	20	h	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg .....	-	20	7	f	D	D	D	D	D	D	D	D
3119	Other food mfg .....	-	38	14	g	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg .....	2	30	16	g	D	D	D	D	D	D	D	D
3121	Beverage mfg .....	2	30	16	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg .....	5	12	8	875	24 959	297	493	8 157	75 063	178 199	250 573	7 075
312111	Soft drink mfg .....	5	9	7	f	D	D	D	D	D	D	D	D
31212	Breweries .....	1	13	6	f	D	D	D	D	D	D	D	D
312120	Breweries .....	1	13	6	f	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	76	14	f	D	D	D	D	D	D	D	D
3149	Other textile product mills ..	3	63	10	f	D	D	D	D	D	D	D	D
315	Apparel mfg .....	2	112	23	g	D	D	D	D	D	D	D	2 462
3152	Cut & sew apparel mfg ....	2	83	20	g	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors .....	2	36	8	f	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg .....	1	12	4	f	D	D	D	D	D	D	D	D
31523	Women's & girls' cut & sew apparel mfg .....	1	21	6	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	1	79	27	g	D	D	D	D	D	D	D	9 568
3219	Other wood product mfg ...	3	63	19	g	D	D	D	D	D	D	D	3 721
32191	Millwork .....	3	34	9	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>KING COUNTY, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
322	Paper mfg .....	-	42	21	g	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	42	21	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	19	14	g	D	D	D	D	D	D	D	D
322211	Corrugated & solid fiber box mfg .....	-	13	9	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	432	86	i	D	D	D	D	D	D	D	D
3231	Printing & related support activities .....	1	432	86	i	D	D	D	D	D	D	D	D
32311	Printing .....	2	385	72	i	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	2	176	43	h	D	D	D	D	D	D	D	D
323113	Commercial screen printing .....	3	51	10	f	D	D	D	D	D	D	D	1 866
323114	Quick printing .....	1	88	6	f	D	D	D	D	D	D	D	D
323116	Manifold business form printing .....	-	10	5	f	D	D	D	D	D	D	D	D
32312	Support activities for printing .....	-	47	14	g	D	D	D	D	D	D	D	D
323122	Prepress services .....	-	30	8	f	D	D	D	D	D	D	D	D
325	Chemical mfg .....	1	82	26	g	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg .....	-	11	4	f	D	D	D	D	D	D	D	18 414
32541	Pharmaceutical & medicine mfg .....	-	11	4	f	D	D	D	D	D	D	D	18 414
326	Plastics & rubber products mfg .....	1	103	43	h	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	1	90	37	h	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	-	7	3		598	16 087	288	533	6 182	47 851	36 891	85 140
326121	Unsupported plastics profile shape mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	1	55	23	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	1	50	21	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	-	87	27	h	D	D	D	D	D	D	D	19 054
3272	Glass & glass product mfg ..	-	34	7	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg .....	-	34	7	g	D	D	D	D	D	D	D	D
327213	Glass container mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass .....	-	21	4	f	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg .....	-	29	15	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	24	13	g	D	D	D	D	D	D	D	10 170
332	Fabricated metal product mfg .....	1	421	99	i	D	D	D	D	D	D	D	42 491
3321	Forging & stamping .....	-	15	7	f	D	D	D	D	D	D	D	D
33211	Forging & stamping .....	-	15	7	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg .....	1	93	24	g	D	D	D	D	D	D	D	4 439
33231	Plate work & fabricated structural product mfg ..	-	34	8	f	D	D	D	D	D	D	D	1 936
332312	Fabricated structural metal mfg .....	-	24	7	f	D	D	D	D	D	D	D	D
33232	Ornamental & architectural metal products mfg .....	2	59	16		1 074	34 323	809	1 623	21 822	70 928	63 559	134 611
332322	Sheet metal work mfg ..	-	33	11		644	21 077	494	931	13 636	46 798	30 517	77 757
3324	Boiler, tank, & shipping container mfg .....	-	14	9		511	21 347	372	797	15 841	51 374	112 675	161 824
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	179	29	g	D	D	D	D	D	D	D	D
33271	Machine shops .....	1	159	24	g	D	D	D	D	D	D	D	D
332710	Machine shops .....	1	159	24	g	D	D	D	D	D	D	D	D

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	<b>KING COUNTY, WA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3328	Coating, engraving, heat treating, & allied activities.	—	45	15	g	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities.....	—	45	15	g	D	D	D	D	D	D	D	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services.....	1	22	8	f	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring .....	—	16	5	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg.....	1	45	9	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	—	178	58	i	D	D	D	D	D	D	D	23 892
3332	Industrial machinery mfg ..	1	34	8	f	D	D	D	D	D	D	D	2 074
33329	Other industrial machinery mfg .....	1	28	8	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	—	11	6	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	—	11	6	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	—	29	7	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg .....	—	29	7	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	—	63	21	g	D	D	D	D	D	D	D	11 859
33392	Material handling equipment mfg .....	—	27	11	g	D	D	D	D	D	D	D	D
333923	Overhead traveling crane, hoist, & monorail system mfg ..	—	11	5	g	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	1	32	10	f	D	D	D	D	D	D	D	4 699
334	Computer & electronic product mfg.....	1	237	87	k	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg .....	1	26	10	f	D	D	D	D	D	D	D	6 483
33411	Computer & peripheral equipment mfg .....	1	26	10	f	D	D	D	D	D	D	D	6 483
334119	Other computer peripheral equipment mfg .....	—	20	5	f	D	D	D	D	D	D	D	D
3342	Communications equipment mfg .....	3	33	12	g	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg .....	4	12	6	g	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg .....	4	12	6	g	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	1	14	5	f	D	D	D	D	D	D	D	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	1	14	5	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	1	58	26	h	D	D	D	D	D	D	D	31 709
33441	Semiconductor & other electronic component mfg .....	1	58	26	h	D	D	D	D	D	D	D	31 709
334412	Bare printed circuit board mfg .....	1	16	8	1 292	40 501	1 006	2 342	27 301	100 114	49 818	150 646	D
334413	Semiconductor & related device mfg...	—	10	2	f	D	D	D	D	D	D	D	D
334419	Other electronic component mfg .....	1	19	6	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>KING COUNTY, WA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg—Con.												
3345	Navigational, measuring, medical, & control instruments mfg .....	—	91	30	j	D	D	D	D	D	D	D	142 045
33451	Navigational, measuring, medical, & control instruments mfg .....	—	91	30	j	D	D	D	D	D	D	D	142 045
334510	Electromedical & electrotherapeutic apparatus mfg .....	—	13	8	h	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, & guidance instrument mfg .....	—	17	9	j	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg .....	—	18	4	f	D	D	D	D	D	D	D	D
3346	Mfg & reproducing magnetic & optical media .	2	23	8	f	D	D	D	D	D	D	D	11 393
33461	Mfg & reproducing magnetic & optical media .....	2	23	8	f	D	D	D	D	D	D	D	11 393
335	Electrical equipment, appliance, & component mfg .....	2	51	14	g	D	D	D	D	D	D	D	7 717
3352	Household appliance mfg ..	—	3	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	7	180	66	k	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	—	3	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	—	1	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	—	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	2	41	12	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	—	8	2	f	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	8	64	31	k	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	8	64	31	k	D	D	D	D	D	D	D	D
336411	Aircraft mfg .....	9	3	2	j	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	—	57	27	j	D	D	D	D	D	D	D	D
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	—	51	17	g	D	D	D	D	D	D	D	D
33661	Ship & boat building ....	—	51	17	g	D	D	D	D	D	D	D	D
336611	Ship building & repairing .....	—	31	13	g	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	2	158	35	h	D	D	D	D	D	D	D	7 797
3371	Household & institutional furniture & kitchen cabinet mfg .....	3	102	16	g	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg .....	2	54	10	f	D	D	D	D	D	D	D	1 317
337110	Wood kitchen cabinet & counter top mfg ...	2	54	10	f	D	D	D	D	D	D	D	1 317
3372	Office furniture (including fixtures) mfg .....	1	47	16	g	D	D	D	D	D	D	D	4 189
33721	Office furniture (including fixtures) mfg .....	1	47	16	g	D	D	D	D	D	D	D	4 189
337211	Wood office furniture mfg .....	—	17	7	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	2	361	53	i	D	D	D	D	D	D	D	33 147
3391	Medical equipment & supplies mfg .....	3	149	20	g	D	D	D	D	D	D	D	12 184
33911	Medical equipment & supplies mfg .....	3	149	20	g	D	D	D	D	D	D	D	12 184
339112	Surgical & medical instrument mfg .....	2	20	6	f	D	D	D	D	D	D	D	D
339116	Dental laboratories ...	4	99	8	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	2	212	33	h	D	D	D	D	D	D	D	20 963
33992	Sporting & athletic goods mfg .....	1	41	14	g	D	D	D	D	D	D	D	D
339920	Sporting & athletic goods mfg .....	1	41	14	g	D	D	D	D	D	D	D	D
33995	Sign mfg .....	3	70	7	f	D	D	D	D	D	D	D	D
339950	Sign mfg .....	3	70	7	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>KITSAP COUNTY, WA</b>													
31-33	Manufacturing ....	2	143	16	1 441	36 809	1 016	1 680	20 851	81 349	59 960	142 740	3 842
<b>KITTITAS COUNTY, WA</b>													
31-33	Manufacturing ....	-	32	5	662	15 573	577	1 048	12 004	59 721	44 097	102 356	1 641
<b>KLICKITAT COUNTY, WA</b>													
31-33	Manufacturing ....	-	25	4	g	D	D	D	D	D	D	D	7 251
331	Primary metal mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	1	1	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	1	1	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>LEWIS COUNTY, WA</b>													
31-33	Manufacturing ....	3	115	41	3 630	97 136	3 036	6 096	74 978	262 151	387 348	648 046	24 124
321	Wood product mfg .....	3	28	19	2 005	59 533	1 717	3 736	48 736	150 289	241 873	389 060	17 741
3211	Sawmills & wood preservation .....	4	12	7	1 271	41 943	1 125	2 590	35 346	113 980	182 107	293 852	15 089
32111	Sawmills & wood preservation .....	4	12	7	1 271	41 943	1 125	2 590	35 346	113 980	182 107	293 852	15 089
321113	Sawmills .....	4	12	7	1 271	41 943	1 125	2 590	35 346	113 980	182 107	293 852	15 089
3219	Other wood product mfg ...	-	12	8	536	13 354	453	895	10 376	24 853	44 347	68 493	2 285
<b>MASON COUNTY, WA</b>													
31-33	Manufacturing ....	-	52	11	1 664	51 707	1 452	2 873	39 681	128 006	219 924	343 911	15 541
321	Wood product mfg .....	-	14	6	g	D	D	D	D	D	D	D	D
3211	Sawmills & wood preservation .....	-	6	4	557	20 145	507	1 061	15 172	65 456	135 718	197 458	12 003
32111	Sawmills & wood preservation .....	-	6	4	557	20 145	507	1 061	15 172	65 456	135 718	197 458	12 003
321113	Sawmills .....	-	6	4	557	20 145	507	1 061	15 172	65 456	135 718	197 458	12 003
<b>OKANOGAN COUNTY, WA</b>													
31-33	Manufacturing ....	-	28	4	794	20 903	697	1 433	17 351	36 029	84 617	123 566	2 840
321	Wood product mfg .....	-	8	4	714	19 198	633	1 347	16 089	31 390	80 245	114 541	2 469
<b>PACIFIC COUNTY, WA</b>													
31-33	Manufacturing ....	-	36	10	848	18 986	756	1 256	16 082	46 417	69 124	112 757	9 886

**Table 3. Industry Statistics for Counties: 1997—Con.**

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>PIERCE COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	<b>1</b>	<b>680</b>	<b>208</b>	<b>22 283</b>	<b>705 185</b>	<b>16 834</b>	<b>34 233</b>	<b>479 523</b>	<b>1 882 247</b>	<b>2 409 154</b>	<b>4 275 910</b>	<b>194 835</b>
311	Food mfg .....	1	52	19	2 002	54 761	1 493	3 254	38 574	296 706	385 234	683 756	16 478
315	Apparel mfg .....	-	17	9	830	21 575	766	1 560	16 887	43 168	76 684	116 940	D
3152	Cut & sew apparel mfg .....	-	14	7	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	-	73	31	3 248	89 647	2 649	5 476	66 395	174 175	412 161	592 002	13 178
3211	Sawmills & wood preservation .....	-	15	12	1 435	44 649	1 127	2 403	31 672	101 989	269 214	373 421	6 670
32111	Sawmills & wood preservation .....	-	15	12	1 435	44 649	1 127	2 403	31 672	101 989	269 214	373 421	6 670
321113	Sawmills .....	-	12	9	1 168	36 758	882	1 910	24 933	65 697	201 545	267 906	6 428
3212	Veneer, plywood, & engineered wood product mfg .....	-	11	8	709	19 975	562	1 231	15 348	24 225	73 772	101 830	3 987
32121	Veneer, plywood, & engineered wood product mfg .....	-	11	8	709	19 975	562	1 231	15 348	24 225	73 772	101 830	3 987
3219	Other wood product mfg .....	1	47	11	1 104	25 023	960	1 842	19 375	47 961	69 175	116 751	2 521
32191	Millwork .....	1	26	8	769	18 379	674	1 325	14 910	33 680	50 312	83 977	1 794
321911	Wood window & door mfg .....	-	12	4	523	11 972	467	920	10 004	21 742	28 369	49 780	927
322	Paper mfg .....	-	17	11	1 378	60 801	1 046	2 165	43 877	197 888	244 424	444 702	31 490
3221	Pulp, paper, & paperboard mills .....	-	4	4	918	46 494	706	1 418	33 839	158 354	184 803	345 162	22 588
32213	Paperboard mills .....	-	3	3	f	D	D	D	D	D	D	D	D
322130	Paperboard mills .....	-	3	3	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	65	12	1 431	40 575	824	1 247	18 198	67 287	52 009	121 432	4 885
3231	Printing & related support activities .....	1	65	12	1 431	40 575	824	1 247	18 198	67 287	52 009	121 432	4 885
32311	Printing .....	1	60	12	1 410	39 942	805	1 214	17 716	65 607	51 688	119 400	4 628
323117	Book printing .....	-	1	1	f	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	16	7	549	22 087	302	606	11 562	89 568	90 920	180 748	6 395
326	Plastics & rubber products mfg .....	3	37	15	1 563	43 201	1 283	2 652	31 930	109 511	129 872	238 453	26 858
3261	Plastics product mfg .....	3	34	15	1 523	41 845	1 251	2 585	30 888	106 970	128 240	234 212	D
32619	Other plastics product mfg .....	4	24	9	1 094	28 102	911	1 726	20 619	63 174	57 622	119 594	10 577
326199	All other plastics product mfg .....	4	21	9	1 068	27 451	894	1 685	20 199	62 478	56 390	117 685	10 551
327	Nonmetallic mineral product mfg .....	-	40	21	1 474	48 590	1 171	2 455	33 783	138 047	104 470	241 542	9 839
3273	Cement & concrete product mfg .....	1	19	11	723	26 328	581	1 281	18 355	65 795	42 541	107 572	5 743
331	Primary metal mfg .....	-	7	3	968	34 510	866	1 868	27 653	92 079	105 808	196 918	D
3315	Foundries .....	-	5	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	94	21	2 108	69 896	1 645	3 251	47 173	141 377	135 807	274 698	9 993
3323	Architectural & structural metals mfg .....	-	31	12	1 156	36 352	894	1 814	23 532	76 794	101 487	177 156	3 872
33232	Ornamental & architectural metal products mfg .....	-	17	9	1 020	31 781	799	1 641	20 975	66 954	89 264	155 198	3 585
332321	Metal window & door mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	1	35	6	819	27 602	594	1 205	17 848	66 525	42 989	107 874	2 732
334	Computer & electronic product mfg .....	3	22	4	609	26 692	293	607	12 252	31 399	30 698	68 605	D
336	Transportation equipment mfg .....	-	39	15	g	D	D	D	D	D	D	D	5 328
3364	Aerospace product & parts mfg .....	-	14	4	1 582	53 089	1 221	2 637	43 762	176 771	64 066	214 320	1 756
33641	Aerospace product & parts mfg .....	-	14	4	1 582	53 089	1 221	2 637	43 762	176 771	64 066	214 320	1 756
336413	Other aircraft part & auxiliary equipment mfg .....	-	10	4	g	D	D	D	D	D	D	D	D
3366	Ship & boat building .....	2	13	7	f	D	D	D	D	D	D	D	664
33661	Ship & boat building .....	2	13	7	f	D	D	D	D	D	D	D	664
337	Furniture & related product mfg .....	1	54	19	1 414	40 818	1 104	2 241	26 865	77 579	63 791	144 882	2 454
3371	Household & institutional furniture & kitchen cabinet mfg .....	2	35	9	801	19 256	646	1 320	13 408	38 942	25 165	63 755	D
339	Miscellaneous mfg .....	5	78	6	561	14 558	402	727	8 432	33 559	17 366	50 880	1 525

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SKAGIT COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	—	<b>185</b>	<b>55</b>	<b>5 026</b>	<b>148 893</b>	<b>3 737</b>	<b>6 513</b>	<b>92 139</b>	<b>691 534</b>	<b>2 234 017</b>	<b>2 917 703</b>	<b>54 569</b>
311	Food mfg . . . . .	—	26	13	1 428	30 263	1 116	1 488	17 406	70 844	108 593	179 439	3 896
3117	Seafood product preparation & packaging..	1	11	9	759	15 840	602	808	10 216	39 291	57 600	96 936	1 273
31171	Seafood product preparation & packaging . . . . .	1	11	9	759	15 840	602	808	10 216	39 291	57 600	96 936	1 273
311712	Fresh & frozen seafood processing ..	—	7	6	600	13 257	473	681	8 379	35 140	51 454	86 641	D
324	Petroleum & coal products mfg . . . . .	—	4	4	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg . . . . .	—	4	4	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries . . . .	—	3	3	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries ..	—	3	3	f	D	D	D	D	D	D	D	D
<b>SNOHOMISH COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	—	<b>837</b>	<b>234</b>	<b>58 170</b>	<b>2 918 132</b>	<b>33 010</b>	<b>75 825</b>	<b>1 534 567</b>	<b>7 380 352</b>	<b>13 013 992</b>	<b>19 903 195</b>	<b>291 441</b>
311	Food mfg . . . . .	3	42	15	g	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	1	66	24	g	D	D	D	D	D	D	D	21 390
3211	Sawmills & wood preservation . . . . .	2	22	9	g	D	D	D	D	D	D	D	D
32111	Sawmills & wood preservation . . . . .	2	22	9	g	D	D	D	D	D	D	D	D
321113	Sawmills . . . . .	2	21	8	g	D	D	D	D	D	D	D	D
3219	Other wood product mfg . . .	—	39	12	f	D	D	D	D	D	D	D	8 338
32191	Millwork . . . . .	—	24	10	f	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	—	6	3	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	5	63	8	f	D	D	D	D	D	D	D	D
3231	Printing & related support activities . . . . .	5	63	8	f	D	D	D	D	D	D	D	D
32311	Printing . . . . .	5	61	8	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	6	31	5	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	—	20	10	g	D	D	D	D	D	D	D	D
3261	Plastics product mfg . . . . .	—	18	9	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	—	16	7	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	—	16	7	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	—	29	11	f	D	D	D	D	D	D	D	8 078
332	Fabricated metal product mfg . . . . .	1	210	51	h	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	1	58	18	g	D	D	D	D	D	D	D	3 343
33232	Ornamental & architectural metal products mfg . . . . .	1	44	15	1 005	28 799	763	1 455	18 491	60 301	53 170	113 411	2 894
332322	Sheet metal work mfg . . . . .	—	28	10	698	18 890	548	1 011	12 277	41 252	35 224	76 426	2 321
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	110	21	g	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	1	98	18	g	D	D	D	D	D	D	D	D
332710	Machine shops . . . . .	1	98	18	g	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg . . . . .	—	14	4	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg . . . . .	—	14	4	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	1	45	13	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>SNOHOMISH COUNTY, WA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>													
334	Computer & electronic product mfg . . . . .	1	59	24	i	D	D	D	D	D	D	D	D	
3341	Computer & peripheral equipment mfg . . . . .	—	6	1	g	D	D	D	D	D	D	D	D	
33411	Computer & peripheral equipment mfg . . . . .	—	6	1	g	D	D	D	D	D	D	D	D	
334119	Other computer peripheral equipment mfg . . . . .	—	6	1	g	D	D	D	D	D	D	D	D	
3344	Semiconductor & other electronic component mfg . . . . .	7	20	7	f	D	D	D	D	D	D	D	D	
33441	Semiconductor & other electronic component mfg . . . . .	7	20	7	f	D	D	D	D	D	D	D	D	
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	—	18	8	h	D	D	D	D	D	D	D	31 706	
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	—	18	8	h	D	D	D	D	D	D	D	31 706	
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D	
334515	Electricity measuring & testing instrument mfg . . . . .	—	6	4	g	D	D	D	D	D	D	D	D	
335	Electrical equipment, appliance, & component mfg . . . . .	1	22	10	f	D	D	D	D	D	D	D	D	
336	Transportation equipment mfg . . . . .	—	62	21	k	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg . . . . .	—	31	13	k	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg . . . . .	—	31	13	k	D	D	D	D	D	D	D	D	
336411	Aircraft mfg . . . . .	—	2	2	k	D	D	D	D	D	D	D	D	
336413	Other aircraft part & auxiliary equipment mfg . . . . .	—	25	9	g	D	D	D	D	D	D	D	D	
3366	Ship & boat building . . . . .	1	14	4	g	D	D	D	D	D	D	D	D	
33661	Ship & boat building . . . . .	1	14	4	g	D	D	D	D	D	D	D	D	
336612	Boat building . . . . .	—	10	3	g	D	D	D	D	D	D	D	D	
337	Furniture & related product mfg . . . . .	1	64	16	g	D	D	D	D	D	D	D	3 447	
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	—	50	9	f	D	D	D	D	D	D	D	2 321	
33711	Wood kitchen cabinet & counter top mfg . . . . .	1	35	4	f	D	D	D	D	D	D	D	D	
337110	Wood kitchen cabinet & counter top mfg . . . . .	1	35	4	f	D	D	D	D	D	D	D	D	
339	Miscellaneous mfg . . . . .	3	77	12	f	D	D	D	D	D	D	D	2 590	
	<b>SPOKANE COUNTY, WA</b>													
<b>31-33</b>	<b>Manufacturing . . . . .</b>	—	<b>572</b>	<b>176</b>		<b>20 892</b>	<b>681 396</b>	<b>14 631</b>	<b>28 708</b>	<b>406 848</b>	<b>1 811 208</b>	<b>2 181 124</b>	<b>3 994 582</b>	<b>155 683</b>
311	Food mfg . . . . .	1	48	20		1 585	46 714	829	1 484	20 844	136 006	178 897	314 480	12 137
3118	Bakeries & tortilla mfg . . . . .	—	18	9		784	27 148	405	731	10 668	65 791	47 395	112 772	1 984
31181	Bread & bakery product mfg . . . . .	—	14	6		685	24 587	339	593	8 947	59 185	30 088	89 010	1 607
311812	Commercial bakeries . . . . .	—	9	5		636	23 728	300	517	8 395	57 162	27 054	84 208	1 579
321	Wood product mfg . . . . .	1	27	8		840	16 837	726	1 362	14 331	44 007	86 060	129 444	D
3219	Other wood product mfg . . . . .	—	18	4		610	12 777	569	1 078	11 713	35 572	69 520	104 489	D
323	Printing & related support activities . . . . .	2	75	10		756	18 174	515	836	10 718	42 069	19 127	61 130	3 534
3231	Printing & related support activities . . . . .	2	75	10		756	18 174	515	836	10 718	42 069	19 127	61 130	3 534
32311	Printing . . . . .	2	65	10		719	17 374	484	788	10 108	40 390	18 745	59 071	3 446
325	Chemical mfg . . . . .	2	16	9		618	21 414	330	1 099	10 551	52 437	74 602	131 345	4 333
326	Plastics & rubber products mfg . . . . .	—	19	9		928	22 513	706	1 450	14 258	51 807	37 806	89 372	2 791
3261	Plastics product mfg . . . . .	—	15	9		889	21 686	672	1 388	13 567	49 365	35 629	84 631	2 671
32619	Other plastics product mfg . . . . .	—	12	8		824	20 015	620	1 287	12 329	45 724	32 696	78 063	D
326199	All other plastics product mfg . . . . .	—	10	8	f			D	D	D	D	D	D	2 458

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SPOKANE COUNTY, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
327	Nonmetallic mineral product mfg .....	1	22	11	711	21 876	529	1 110	13 785	63 376	51 779	114 302	5 164
331	Primary metal mfg .....	—	12	10	3 948	173 930	3 155	6 708	121 818	610 865	895 159	1 516 154	68 854
3313	Alumina & aluminum production & processing ..	—	2	2	h	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	—	2	2	h	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	—	1	1	g	D	D	D	D	D	D	D	D
331315	Aluminum sheet, plate, & foil mfg .....	—	1	1	g	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing .....	—	2	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	—	2	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding .....	—	1	1	f	D	D	D	D	D	D	D	D
3315	Foundries .....	—	8	7	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	3	2	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	—	3	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	111	29	1 839	52 876	1 403	2 540	33 551	112 299	101 364	212 779	8 473
3323	Architectural & structural metals mfg .....	1	43	16	1 077	31 045	790	1 445	18 375	69 157	79 240	147 997	3 817
33232	Ornamental & architectural metal products mfg .....	1	25	10	689	18 625	524	956	11 690	45 818	57 120	102 635	2 960
332322	Sheet metal work mfg ..	—	17	9	616	16 709	474	859	10 555	41 938	53 060	94 671	2 830
333	Machinery mfg .....	1	41	9	1 287	42 893	897	1 646	25 244	79 695	51 384	132 825	2 958
3339	Other general-purpose machinery mfg .....	—	11	3	644	23 534	443	794	13 320	39 561	24 482	64 900	995
334	Computer & electronic product mfg .....	—	27	14	3 632	128 442	1 997	3 692	57 161	360 522	380 315	728 524	D
3341	Computer & peripheral equipment mfg .....	1	8	4	1 753	55 828	852	1 740	23 656	130 315	180 764	307 885	D
33411	Computer & peripheral equipment mfg .....	1	8	4	1 753	55 828	852	1 740	23 656	130 315	180 764	307 885	D
334111	Electronic computer mfg .....	—	2	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	2	6	3	g	D	D	D	D	D	D	D	D
3342	Communications equipment mfg .....	—	6	3	f	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	—	10	4	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	—	10	4	g	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg .....	—	3	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	2	8	4	722	21 145	511	1 044	12 413	43 455	39 936	83 275	D
3351	Electric lighting equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg ...	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	2	40	15	g	D	D	D	D	D	D	D	4 549
3363	Motor vehicle parts mfg ...	6	17	9	f	D	D	D	D	D	D	D	2 792
3364	Aerospace product & parts mfg .....	1	7	2	617	27 124	478	885	19 557	25 566	26 966	52 277	560
33641	Aerospace product & parts mfg .....	1	7	2	617	27 124	478	885	19 557	25 566	26 966	52 277	560
336413	Other aircraft part & auxiliary equipment mfg .....	1	6	2	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SPOKANE COUNTY, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
337	Furniture & related product mfg .....	1	31	4	620	12 781	474	881	7 909	24 053	21 772	46 003	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	1	22	3	516	10 365	415	770	6 478	17 906	16 710	34 722	D
339	Miscellaneous mfg .....	3	60	8	f	D	D	D	D	D	D	D	D
	<b>STEVENS COUNTY, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>40</b>	<b>12</b>	<b>1 546</b>	<b>53 574</b>	<b>1 293</b>	<b>2 662</b>	<b>41 166</b>	<b>126 566</b>	<b>237 176</b>	<b>363 594</b>	<b>10 354</b>
321	Wood product mfg .....	-	13	5	f	D	D	D	D	D	D	D	D
3211	Sawmills & wood preservation .....	-	11	4	541	17 628	472	995	14 599	45 962	113 065	158 162	D
32111	Sawmills & wood preservation .....	-	11	4	541	17 628	472	995	14 599	45 962	113 065	158 162	D
321113	Sawmills .....	-	9	4	f	D	D	D	D	D	D	D	D
	<b>THURSTON COUNTY, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>156</b>	<b>37</b>	<b>3 218</b>	<b>100 654</b>	<b>2 503</b>	<b>4 590</b>	<b>69 868</b>	<b>304 361</b>	<b>465 229</b>	<b>761 028</b>	<b>29 218</b>
326	Plastics & rubber products mfg .....	-	8	5	613	16 943	532	1 013	12 407	71 469	49 506	118 112	17 715
3261	Plastics product mfg .....	-	8	5	613	16 943	532	1 013	12 407	71 469	49 506	118 112	17 715
332	Fabricated metal product mfg .....	-	21	8	527	20 964	432	820	16 101	59 019	107 071	156 877	1 085
	<b>WALLA WALLA COUNTY, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>66</b>	<b>15</b>	<b>2 400</b>	<b>89 376</b>	<b>1 907</b>	<b>3 770</b>	<b>64 800</b>	<b>245 481</b>	<b>307 974</b>	<b>544 683</b>	<b>21 901</b>
322	Paper mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	8	3	f	D	D	D	D	D	D	D	D
	<b>WHATCOM COUNTY, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>314</b>	<b>84</b>	<b>9 184</b>	<b>281 360</b>	<b>6 856</b>	<b>12 975</b>	<b>183 074</b>	<b>841 770</b>	<b>3 090 001</b>	<b>3 946 981</b>	<b>86 393</b>
311	Food mfg .....	-	42	19	1 372	31 740	1 107	1 877	22 200	162 162	292 567	465 837	5 544
3117	Seafood product preparation & packaging ..	-	15	9	815	15 744	727	1 211	12 546	45 521	105 226	150 775	2 046
31171	Seafood product preparation & packaging .....	-	15	9	815	15 744	727	1 211	12 546	45 521	105 226	150 775	2 046
311712	Fresh & frozen seafood processing ..	-	14	9	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	1	28	11	1 014	25 476	861	1 654	18 980	59 082	132 270	182 993	3 321
322	Paper mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	f	D	D	D	D	D	D	D	D
324	Petroleum & coal products mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries .....	-	2	2	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries ..	-	2	2	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	4	1	g	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	1	1	g	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	1	1	g	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	30	8	f	D	D	D	D	D	D	D	1 932

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WHATCOM COUNTY, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	5	32	7	516	12 197	383	645	7 341	21 738	16 483	42 070	738
	<b>YAKIMA COUNTY, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>239</b>	<b>89</b>	<b>10 163</b>	<b>264 561</b>	<b>8 183</b>	<b>15 635</b>	<b>186 897</b>	<b>761 968</b>	<b>1 332 210</b>	<b>2 090 544</b>	<b>89 956</b>
311	Food mfg.....	—	36	22	3 281	76 005	2 911	5 425	58 753	297 921	678 328	977 631	36 770
3114	Fruit & vegetable preserving & specialty food mfg.....	—	22	16	2 394	55 496	2 162	3 981	43 111	186 931	329 377	518 145	D
31142	Fruit & vegetable canning, pickling, & drying.....	—	20	14	g	D	D	D	D	D	D	D	12 584
311421	Fruit & vegetable canning.....	—	17	12	g	D	D	D	D	D	D	D	D
3116	Meat product mfg.....	—	3	3	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing.....	—	3	3	f	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering.....	—	3	3	f	D	D	D	D	D	D	D	D
321	Wood product mfg.....	—	25	13	1 525	39 503	1 351	2 636	30 912	88 581	196 592	282 878	11 870
3219	Other wood product mfg...	—	16	8	f	D	D	D	D	D	D	D	D
32191	Millwork.....	—	6	4	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	1	15	10	1 403	41 794	1 118	2 271	26 986	100 003	146 788	246 770	16 248
3261	Plastics product mfg.....	1	15	10	1 403	41 794	1 118	2 271	26 986	100 003	146 788	246 770	16 248
32619	Other plastics product mfg.....	3	7	5	589	17 890	445	880	9 953	37 901	37 384	75 594	3 211
326199	All other plastics product mfg.....	3	7	5	589	17 890	445	880	9 953	37 901	37 384	75 594	3 211
332	Fabricated metal product mfg.....	—	33	9	909	26 979	605	1 102	18 619	60 187	51 924	109 747	3 199
333	Machinery mfg.....	6	33	6	779	19 645	483	727	10 310	44 186	41 492	87 116	3 949
336	Transportation equipment mfg.....	—	6	3	f	D	D	D	D	D	D	D	801
339	Miscellaneous mfg.....	1	27	6	516	10 363	341	608	6 377	27 942	17 951	46 211	2 376

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c–100 to 249 employees; e–250 to 499 employees; f–500 to 999 employees; g–1,000 to 2,499 employees; h–2,500 to 4,999 employees; i–5,000 to 9,999 employees; j–10,000 to 24,999 employees; k–25,000 to 49,999 employees; l–50,000 to 99,999 employees; m–100,000 employees or more.

**Table 4. Industry Statistics for Places: 1997**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>ANACORTES, WA</b>												
	<b>Manufacturing ....</b>	—	<b>37</b>	<b>16</b>	<b>1 374</b>	<b>48 842</b>	<b>933</b>	<b>1 754</b>	<b>28 511</b>	<b>235 551</b>	<b>1 226 800</b>	<b>1 464 014</b>	<b>27 762</b>
	<b>ARLINGTON, WA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	1	<b>75</b>	<b>30</b>	<b>3 152</b>	<b>96 744</b>	<b>2 382</b>	<b>4 049</b>	<b>53 504</b>	<b>181 143</b>	<b>205 165</b>	<b>386 125</b>	<b>33 029</b>
332	Fabricated metal product mfg.....	1	20	10	675	19 199	541	861	13 440	48 277	25 527	72 200	7 776
336	Transportation equipment mfg.....	1	10	4	1 130	40 465	778	1 115	14 119	26 317	24 623	56 110	D
3366	Ship & boat building.....	—	2	2	f	D	D	D	D	D	D	D	D
33661	Ship & boat building.....	—	2	2	f	D	D	D	D	D	D	D	D
336612	Boat building.....	—	2	2	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>AUBURN, WA</b>													
31-33	Manufacturing . . . .	-	167	39	13 946	605 221	9 598	22 707	438 110	1 205 661	676 413	1 875 825	80 393
326	Plastics & rubber products mfg . . . . .	2	12	7	f	D	D	D	D	D	D	D	3 147
3261	Plastics product mfg . . . . .	2	12	7	f	D	D	D	D	D	D	D	3 147
332	Fabricated metal product mfg . . . . .	3	52	7	f	D	D	D	D	D	D	D	3 394
336	Transportation equipment mfg . . . . .	-	20	9	j	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg . . . . .	-	14	7	j	D	D	D	D	D	D	D	67 566
33641	Aerospace product & parts mfg . . . . .	-	14	7	j	D	D	D	D	D	D	D	67 566
336413	Other aircraft part & auxiliary equipment mfg . . . . .	-	14	7	j	D	D	D	D	D	D	D	67 566
<b>BELLEVUE, WA</b>													
31-33	Manufacturing . . . .	4	163	29	2 740	93 342	1 754	3 196	48 435	281 164	400 764	681 840	22 465
<b>BELLINGHAM, WA</b>													
31-33	Manufacturing . . . .	-	130	32	3 457	91 500	2 562	4 777	61 877	235 158	340 067	583 859	20 443
311	Food mfg . . . . .	1	19	9	f	D	D	D	D	D	D	D	3 310
3117	Seafood product preparation & packaging . . . . .	-	9	7	f	D	D	D	D	D	D	D	D
31171	Seafood product preparation & packaging . . . . .	-	9	7	f	D	D	D	D	D	D	D	D
311712	Fresh & frozen seafood processing . . . . .	-	8	7	f	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>BLAINE, WA</b>													
31-33	Manufacturing . . . .	-	13	7	f	D	D	D	D	D	D	D	D
<b>BOTHELL, WA *</b>													
31-33	Manufacturing . . . .	-	50	20	4 260	217 140	1 863	3 693	46 598	383 068	336 645	707 031	30 382
334	Computer & electronic product mfg . . . . .	-	13	9	h	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	-	7	5	h	D	D	D	D	D	D	D	20 176
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	-	7	5	h	D	D	D	D	D	D	D	20 176
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	-	11	4	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
33992	Sporting & athletic goods mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
339920	Sporting & athletic goods mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
<b>BURLINGTON, WA</b>													
31-33	Manufacturing . . . .	-	28	14	1 298	30 404	1 051	1 755	21 659	80 459	74 441	154 654	6 255

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CAMAS, WA</b>													
31-33	<b>Manufacturing ....</b>	-	16	6	2 464	97 851	1 782	3 536	55 965	356 949	296 743	649 008	D
322	Paper mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	g	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	4	3	657	31 815	298	643	6 775	82 312	46 738	127 789	D
3344	Semiconductor & other electronic component mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
<b>CHEHALIS, WA</b>													
31-33	<b>Manufacturing ....</b>	-	35	14	1 322	35 919	1 054	2 060	25 965	111 512	162 724	270 866	9 873
321	Wood product mfg .....	-	8	7	635	16 601	510	975	12 483	40 282	60 298	97 682	5 792
<b>COLVILLE, WA</b>													
31-33	<b>Manufacturing ....</b>	1	15	6	536	16 408	411	861	11 503	35 882	55 517	91 683	1 692
<b>EVERETT, WA</b>													
31-33	<b>Manufacturing ....</b>	-	130	48	k	D	D	D	D	D	D	D	177 301
321	Wood product mfg .....	2	10	7	f	D	D	D	D	D	D	D	5 913
322	Paper mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	28	11	f	D	D	D	D	D	D	D	1 438
334	Computer & electronic product mfg .....	-	7	2	h	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	12	4	k	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	5	3	k	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	5	3	k	D	D	D	D	D	D	D	D
336411	Aircraft mfg .....	-	1	1	k	D	D	D	D	D	D	D	D
<b>FEDERAL WAY, WA</b>													
31-33	<b>Manufacturing ....</b>	3	32	5	556	15 725	428	779	10 073	46 205	20 290	66 776	2 015
<b>FERNDALE, WA</b>													
31-33	<b>Manufacturing ....</b>	-	23	7	794	33 005	563	1 299	18 788	121 072	676 735	799 603	10 907
<b>FIFE, WA</b>													
31-33	<b>Manufacturing ....</b>	1	32	16	1 897	55 830	1 267	2 303	34 151	127 094	120 309	246 407	7 556
323	Printing & related support activities .....	-	5	2	605	12 665	344	328	5 515	14 611	19 699	36 001	86
3231	Printing & related support activities .....	-	5	2	605	12 665	344	328	5 515	14 611	19 699	36 001	86
32311	Printing .....	-	5	2	605	12 665	344	328	5 515	14 611	19 699	36 001	86
323117	Book printing .....	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>HOQUIAM, WA</b>													
31-33	Manufacturing ....	-	14	5	925	34 686	805	1 639	29 201	57 050	128 730	183 115	D
<b>ISSAQUAH, WA</b>													
31-33	Manufacturing ....	-	40	11	1 505	73 006	789	1 554	28 727	137 111	198 034	313 151	7 128
334	Computer & electronic product mfg .....	-	18	6	1 116	60 211	492	989	19 327	98 397	73 555	149 438	5 853
3345	Navigational, measuring, medical, & control instruments mfg .....	-	9	4	1 002	55 869	397	791	16 267	88 457	67 646	133 479	4 746
33451	Navigational, measuring, medical, & control instruments mfg .....	-	9	4	1 002	55 869	397	791	16 267	88 457	67 646	133 479	4 746
<b>KENNEWICK, WA</b>													
31-33	Manufacturing ....	-	46	4	f	D	D	D	D	D	D	D	D
<b>KENT, WA</b>													
31-33	Manufacturing ....	-	295	127	26 894	1 274 764	12 515	23 951	396 202	2 503 653	1 439 184	3 997 375	160 404
311	Food mfg .....	-	21	17	1 868	51 598	1 420	2 565	33 739	314 989	292 411	603 109	7 620
3118	Bakeries & tortilla mfg .....	-	8	6	599	16 559	456	929	9 841	109 514	98 089	206 238	3 834
3119	Other food mfg .....	-	6	5	523	13 702	340	682	8 233	110 631	125 015	228 592	1 468
323	Printing & related support activities .....	3	33	15	1 169	41 077	838	1 547	25 004	90 402	58 166	147 893	4 206
3231	Printing & related support activities .....	3	33	15	1 169	41 077	838	1 547	25 004	90 402	58 166	147 893	4 206
32311	Printing .....	3	31	14	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	5	12	5	628	24 942	422	834	14 524	48 567	33 863	81 653	1 586
326	Plastics & rubber products mfg .....	1	19	13	1 354	40 199	879	1 952	23 963	104 344	110 863	214 582	14 705
3261	Plastics product mfg .....	1	16	11	1 285	38 850	824	1 890	23 061	101 841	108 631	209 820	14 490
332	Fabricated metal product mfg .....	-	78	24	2 003	69 522	1 604	3 342	51 080	187 522	161 014	345 024	13 273
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	38	9	639	24 448	521	1 096	17 426	71 498	25 478	95 037	7 050
33271	Machine shops .....	-	32	8	501	17 595	404	826	12 331	53 794	19 452	72 281	6 833
332710	Machine shops .....	-	32	8	501	17 595	404	826	12 331	53 794	19 452	72 281	6 833
3328	Coating, engraving, heat treating, & allied activities ..	-	8	4	552	16 023	444	976	11 614	39 648	8 350	47 241	2 893
33281	Coating, engraving, heat treating, & allied activities .....	-	8	4	552	16 023	444	976	11 614	39 648	8 350	47 241	2 893
333	Machinery mfg .....	-	27	11	f	D	D	D	D	D	D	D	2 870
334	Computer & electronic product mfg .....	-	15	9	15 467	889 328	4 315	7 370	167 918	1 351 501	414 914	1 831 357	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	5	4	j	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	5	4	j	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, & guidance instrument mfg .....	-	1	1	j	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	25	12	g	D	D	D	D	D	D	D	15 339
3364	Aerospace product & parts mfg .....	-	15	8	g	D	D	D	D	D	D	D	13 704
33641	Aerospace product & parts mfg .....	-	15	8	g	D	D	D	D	D	D	D	13 704
336413	Other aircraft part & auxiliary equipment mfg .....	-	14	8	g	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	-	15	8	820	22 839	664	1 386	14 256	50 561	34 622	85 334	2 163
3372	Office furniture (including fixtures) mfg .....	-	6	3	f	D	D	D	D	D	D	D	1 798
33721	Office furniture (including fixtures) mfg .....	-	6	3	f	D	D	D	D	D	D	D	1 798
<b>KIRKLAND, WA</b>													
31-33	Manufacturing ....	1	93	21	1 941	63 249	1 366	2 512	34 830	194 142	124 178	315 839	15 391
334	Computer & electronic product mfg .....	-	10	6	f	D	D	D	D	D	D	D	D

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LAKEWOOD, WA *</b>													
31-33	Manufacturing ....	1	44	9	624	14 518	452	806	8 487	33 679	37 342	71 367	2 936
<b>LONGVIEW, WA</b>													
31-33	Manufacturing ....	-	46	17	2 556	115 160	1 908	3 868	80 307	336 920	479 126	824 265	27 932
322	Paper mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills .....	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills .....	-	1	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	1	1	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	1	1	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>LYNNWOOD, WA</b>													
31-33	Manufacturing ....	6	61	14	1 526	40 796	1 084	2 119	23 446	75 004	66 591	145 928	5 297
323	Printing & related support activities .....	9	8	1	520	11 956	359	683	6 351	22 882	10 751	37 038	D
3231	Printing & related support activities .....	9	8	1	520	11 956	359	683	6 351	22 882	10 751	37 038	D
32311	Printing .....	9	8	1	520	11 956	359	683	6 351	22 882	10 751	37 038	D
323110	Commercial lithographic printing ..	9	6	1	f	D	D	D	D	D	D	D	D
<b>MARYSVILLE, WA</b>													
31-33	Manufacturing ....	1	53	13	1 374	47 431	1 079	2 396	32 576	91 262	113 958	199 828	6 283
<b>MONROE, WA</b>													
31-33	Manufacturing ....	2	41	8	542	13 186	436	669	9 033	29 181	23 131	51 874	3 215
<b>MOUNT VERNON, WA</b>													
31-33	Manufacturing ....	1	27	2	527	13 230	381	501	5 722	32 585	43 363	75 761	1 694
<b>MUKILTEO, WA</b>													
31-33	Manufacturing ....	-	66	25	1 970	71 143	1 147	2 225	30 012	177 627	101 688	271 792	10 899
332	Fabricated metal product mfg .....	-	22	8	849	35 623	398	786	10 730	93 909	37 670	130 734	3 167
<b>OLYMPIA, WA</b>													
31-33	Manufacturing ....	-	47	15	1 368	47 287	1 118	2 034	36 583	155 664	239 660	387 034	4 009
<b>OTHELLO, WA</b>													
31-33	Manufacturing ....	5	11	2	g	D	D	D	D	D	D	D	D
311	Food mfg .....	5	6	2	1 065	25 500	947	2 031	20 145	126 113	146 082	272 264	D
3114	Fruit & vegetable preserving & specialty food mfg .....	5	3	2	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	5	3	2	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg .....	5	3	2	g	D	D	D	D	D	D	D	D
<b>PASCO, WA</b>													
31-33	Manufacturing ....	1	34	4	f	D	D	D	D	D	D	D	8 158
<b>PORT ANGELES, WA</b>													
31-33	Manufacturing ....	1	20	5	796	33 583	613	1 303	25 824	108 889	132 292	253 980	5 125

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<b>PROSSER, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>15</b>	<b>5</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>3 133</b>
311	Food mfg.....	-	5	4	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	3	3	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
<b>PUYALLUP, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>38</b>	<b>15</b>	<b>2 482</b>	<b>83 054</b>	<b>1 823</b>	<b>3 728</b>	<b>59 137</b>	<b>223 122</b>	<b>114 982</b>	<b>320 511</b>	<b>D</b>
336	Transportation equipment mfg.....	-	3	2	g	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg.....	-	3	2	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg.....	-	3	2	g	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg.....	-	2	2	g	D	D	D	D	D	D	D	D
<b>QUINCY, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>6</b>	<b>2</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
311	Food mfg.....	-	4	2	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	2	2	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg.....	-	2	2	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg.....	-	2	2	g	D	D	D	D	D	D	D	D
<b>REDMOND, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>227</b>	<b>87</b>	<b>11 807</b>	<b>448 498</b>	<b>6 686</b>	<b>13 089</b>	<b>173 229</b>	<b>1 297 879</b>	<b>891 212</b>	<b>2 183 742</b>	<b>84 145</b>
323	Printing & related support activities.....	-	34	6	697	28 671	418	818	16 320	63 437	14 977	78 249	1 520
3231	Printing & related support activities.....	-	34	6	697	28 671	418	818	16 320	63 437	14 977	78 249	1 520
333	Machinery mfg.....	-	18	11	1 488	41 361	1 195	2 376	29 385	126 940	211 623	339 219	8 556
3339	Other general-purpose machinery mfg.....	-	6	3	g	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg.....	-	2	1	g	D	D	D	D	D	D	D	D
333923	Overhead traveling crane, hoist, & monorail system mfg.....	-	2	1	g	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg.....	1	47	30	5 309	222 722	2 453	5 181	63 480	733 821	383 816	1 112 063	43 498
3342	Communications equipment mfg.....	5	9	5	971	56 220	301	588	8 817	115 650	53 734	168 864	6 973
33421	Telephone apparatus mfg.....	7	4	3	643	42 895	169	329	5 372	86 548	40 875	126 503	D
334210	Telephone apparatus mfg.....	7	4	3	643	42 895	169	329	5 372	86 548	40 875	126 503	D
3344	Semiconductor & other electronic component mfg.....	1	15	10	1 459	49 329	1 017	2 295	25 741	120 964	68 459	191 271	4 740
33441	Semiconductor & other electronic component mfg.....	1	15	10	1 459	49 329	1 017	2 295	25 741	120 964	68 459	191 271	4 740
334412	Bare printed circuit board mfg.....	2	6	4	754	24 098	638	1 590	18 512	61 389	33 068	95 927	D
3345	Navigational, measuring, medical, & control instruments mfg.....	-	18	11	2 488	99 997	916	1 921	24 233	441 948	194 050	630 719	27 590
33451	Navigational, measuring, medical, & control instruments mfg.....	-	18	11	2 488	99 997	916	1 921	24 233	441 948	194 050	630 719	27 590
334510	Electromedical & electrotherapeutic apparatus mfg.....	-	5	4	g	D	D	D	D	D	D	D	23 430
334511	Search, detection, navigation, & guidance instrument mfg.....	-	4	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>31-33</b>	<b>REDMOND, WA—Con.</b>													
	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg .....	1	7	3	g	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
339	Miscellaneous mfg .....	1	30	11		1 299	50 491	771	1 414	21 202	125 331	82 703	210 158	9 558
3391	Medical equipment & supplies mfg .....	1	11	4		667	33 859	303	556	11 203	86 104	47 485	133 332	7 894
33911	Medical equipment & supplies mfg .....	1	11	4		667	33 859	303	556	11 203	86 104	47 485	133 332	7 894
339112	Surgical & medical instrument mfg .....	1	7	4		655	33 523	295	543	11 037	85 246	47 050	132 024	7 856
3399	Other miscellaneous mfg ..	1	19	7		632	16 632	468	858	9 999	39 227	35 218	76 826	1 664
	<b>RENTON, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>8</b>	<b>70</b>	<b>24</b>	<b>k</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>59 989</b>
336	Transportation equipment mfg .....	9	8	5	k	D	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	—	1	1	g	D	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	—	1	1	g	D	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	—	1	1	g	D	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	9	4	3	j	D	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	9	4	3	j	D	D	D	D	D	D	D	D	D
336411	Aircraft mfg .....	9	2	1	j	D	D	D	D	D	D	D	D	D
	<b>RICHLAND, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>—</b>	<b>28</b>	<b>5</b>	<b>1 449</b>	<b>65 615</b>	<b>980</b>	<b>2 260</b>	<b>32 250</b>	<b>138 617</b>	<b>141 353</b>	<b>294 230</b>	<b>23 292</b>	
311	Food mfg .....	—	4	1	f	D	D	D	D	D	D	D	D	
325	Chemical mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
3251	Basic chemical mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
32518	Other basic inorganic chemical mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
325188	All other basic inorganic chemical mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
	<b>SEATTLE, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>1 213</b>	<b>348</b>	<b>33 935</b>	<b>1 132 711</b>	<b>22 619</b>	<b>46 290</b>	<b>651 039</b>	<b>2 722 952</b>	<b>2 300 010</b>	<b>5 021 058</b>	<b>186 762</b>	
311	Food mfg .....	1	171	69		8 670	268 247	5 634	12 456	173 624	748 039	873 428	1 618 281	44 890
3115	Dairy product mfg .....	1	8	5		621	24 220	365	731	14 640	66 103	147 614	212 704	4 584
3117	Seafood product preparation & packaging..	1	42	30	h	D	D	D	D	D	D	D	D	16 771
31171	Seafood product preparation & packaging .....	1	42	30	h	D	D	D	D	D	D	D	D	16 771
311712	Fresh & frozen seafood processing ..	1	37	30	h	D	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	2	69	17		3 556	105 395	1 495	3 165	46 193	262 116	180 573	442 481	18 795
31181	Bread & bakery product mfg .....	2	55	13		3 060	88 857	1 181	2 680	39 089	181 793	124 806	306 669	10 397
311812	Commercial bakeries ..	2	24	13		2 955	87 560	1 109	2 606	38 452	178 769	122 935	301 774	10 217
312	Beverage & tobacco product mfg .....	3	13	9		1 352	32 316	394	773	11 114	109 422	100 439	209 458	6 866
3121	Beverage mfg .....	3	13	9		1 352	32 316	394	773	11 114	109 422	100 439	209 458	6 866
31211	Soft drink & ice mfg .....	6	5	4	f	D	D	D	D	D	D	D	D	D
312111	Soft drink mfg .....	6	4	3	f	D	D	D	D	D	D	D	D	D
31212	Breweries .....	—	8	5	f	D	D	D	D	D	D	D	D	D
312120	Breweries .....	—	8	5	f	D	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	49	10	f	D	D	D	D	D	D	D	D	D
315	Apparel mfg .....	2	74	21		1 980	40 465	1 698	3 437	28 696	65 417	56 515	122 536	2 151
3152	Cut & sew apparel mfg ....	1	54	18	g	D	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg .....	1	10	4	f	D	D	D	D	D	D	D	D	D
322	Paper mfg .....	—	12	6		564	20 490	362	728	11 015	42 276	49 945	91 154	2 995
3222	Converted paper product mfg .....	—	12	6		564	20 490	362	728	11 015	42 276	49 945	91 154	2 995

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SEATTLE, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
323	Printing & related support activities.....	1	205	46	2 945	108 934	2 051	4 040	63 761	206 413	112 265	317 981	25 046
3231	Printing & related support activities.....	1	205	46	2 945	108 934	2 051	4 040	63 761	206 413	112 265	317 981	25 046
32311	Printing.....	1	180	39	2 517	91 282	1 712	3 393	52 237	175 720	106 270	281 584	23 453
323110	Commercial lithographic printing ..	1	86	24	1 582	61 504	1 077	2 205	36 318	117 543	73 400	190 758	18 794
325	Chemical mfg.....	1	31	10	774	44 554	436	909	13 090	116 248	91 511	207 009	D
326	Plastics & rubber products mfg.....	1	25	8	1 151	30 570	897	1 695	20 337	77 484	51 157	127 373	4 692
3261	Plastics product mfg.....	-	22	7	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg.....	-	12	5	822	19 710	650	1 213	13 721	51 428	31 226	80 640	2 999
326199	All other plastics product mfg.....	-	11	5	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg.....	-	43	14	1 609	60 584	1 276	2 603	44 243	194 546	159 067	365 338	14 388
3272	Glass & glass product mfg.....	-	22	4	1 016	34 481	843	1 684	27 035	114 632	59 971	183 982	8 385
32721	Glass & glass product mfg.....	-	22	4	1 016	34 481	843	1 684	27 035	114 632	59 971	183 982	8 385
327213	Glass container mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg.....	-	13	7	664	27 133	534	1 204	19 767	108 292	121 848	234 137	6 621
332	Fabricated metal product mfg.....	-	131	37	3 028	101 855	2 241	4 305	59 952	185 258	115 380	299 818	12 367
3323	Architectural & structural metals mfg.....	1	37	8	508	17 843	363	721	10 921	29 442	29 822	58 650	988
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	-	39	9	f	D	D	D	D	D	D	D	5 235
33271	Machine shops.....	-	33	7	697	24 085	533	943	13 753	42 176	10 899	52 778	3 557
332710	Machine shops.....	-	33	7	697	24 085	533	943	13 753	42 176	10 899	52 778	3 557
3328	Coating, engraving, heat treating, & allied activities.....	-	17	8	955	29 662	742	1 508	17 375	58 627	20 065	77 628	2 954
33281	Coating, engraving, heat treating, & allied activities.....	-	17	8	955	29 662	742	1 508	17 375	58 627	20 065	77 628	2 954
332813	Electroplating, plating, polishing, anodizing, & coloring.....	-	8	4	751	23 624	556	1 094	12 715	47 601	16 769	63 275	2 515
333	Machinery mfg.....	1	50	19	1 564	66 991	992	2 099	36 811	151 751	97 533	251 257	5 262
3339	Other general-purpose machinery mfg.....	1	18	8	572	26 549	355	764	15 705	58 032	40 721	99 322	1 633
334	Computer & electronic product mfg.....	3	70	17	2 029	83 599	934	1 814	25 375	217 271	111 801	323 380	26 470
3344	Semiconductor & other electronic component mfg.....	-	19	6	994	34 359	501	1 027	12 717	83 461	23 711	105 464	D
33441	Semiconductor & other electronic component mfg.....	-	19	6	994	34 359	501	1 027	12 717	83 461	23 711	105 464	D
334419	Other electronic component mfg.....	-	9	3	588	21 364	260	548	7 208	48 900	11 383	59 811	D
336	Transportation equipment mfg.....	1	68	25	3 862	142 036	2 376	5 002	80 167	273 663	183 440	452 934	11 136
3364	Aerospace product & parts mfg.....	2	11	6	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg.....	2	11	6	g	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg.....	-	9	5	g	D	D	D	D	D	D	D	D
3366	Ship & boat building.....	-	36	15	2 042	88 500	1 358	3 287	54 853	161 912	85 067	246 760	D
33661	Ship & boat building.....	-	36	15	2 042	88 500	1 358	3 287	54 853	161 912	85 067	246 760	D
336611	Ship building & repairing.....	-	23	12	1 858	81 615	1 219	3 027	51 034	147 529	77 572	225 101	D
337	Furniture & related product mfg.....	4	73	14	f	D	D	D	D	D	D	D	2 617
339	Miscellaneous mfg.....	3	124	19	1 321	41 527	936	1 622	23 083	97 011	47 495	144 782	3 211
3399	Other miscellaneous mfg ..	3	86	13	979	29 039	682	1 219	16 724	68 368	34 360	102 700	1 414

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SELAH, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>6</b>	<b>4</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>8 281</b>
311	Food mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying .....	-	3	3	f	D	D	D	D	D	D	D	D
<b>SHELTON, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>13</b>	<b>5</b>	<b>1 137</b>	<b>36 925</b>	<b>999</b>	<b>2 031</b>	<b>28 457</b>	<b>94 510</b>	<b>168 157</b>	<b>259 943</b>	<b>D</b>
321	Wood product mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
<b>SPOKANE, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>315</b>	<b>89</b>	<b>6 862</b>	<b>210 024</b>	<b>4 435</b>	<b>8 495</b>	<b>121 023</b>	<b>447 426</b>	<b>470 427</b>	<b>927 544</b>	<b>30 099</b>
311	Food mfg .....	-	28	16	1 320	40 021	631	1 114	17 055	110 787	128 872	239 662	8 858
3118	Bakeries & tortilla mfg ....	-	13	9	f	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg .....	-	9	6	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	-	7	5	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	2	48	8	587	14 552	375	643	8 334	34 068	13 806	47 811	2 844
3231	Printing & related support activities .....	2	48	8	587	14 552	375	643	8 334	34 068	13 806	47 811	2 844
32311	Printing .....	2	42	8	562	13 906	355	607	7 849	32 749	13 502	46 190	2 790
332	Fabricated metal product mfg .....	2	65	16	811	22 365	626	1 112	14 513	44 400	41 669	86 178	2 668
333	Machinery mfg .....	1	21	2	526	17 717	354	587	9 984	27 350	20 000	47 269	914
336	Transportation equipment mfg .....	3	32	12	g	D	D	D	D	D	D	D	3 133
3364	Aerospace product & parts mfg .....	1	6	2	f	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	1	6	2	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	1	6	2	f	D	D	D	D	D	D	D	D
<b>SUMNER, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>26</b>	<b>15</b>	<b>1 504</b>	<b>37 193</b>	<b>1 293</b>	<b>2 555</b>	<b>29 492</b>	<b>97 435</b>	<b>170 026</b>	<b>265 876</b>	<b>5 362</b>
321	Wood product mfg .....	-	8	6	519	11 243	442	867	9 241	30 492	42 901	74 991	426
<b>SUNNYSIDE, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>16</b>	<b>6</b>	<b>543</b>	<b>14 117</b>	<b>445</b>	<b>761</b>	<b>9 536</b>	<b>64 920</b>	<b>147 511</b>	<b>210 957</b>	<b>14 434</b>
<b>TACOMA, WA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>276</b>	<b>104</b>	<b>10 894</b>	<b>363 498</b>	<b>8 320</b>	<b>17 358</b>	<b>250 449</b>	<b>1 037 083</b>	<b>1 585 468</b>	<b>2 625 635</b>	<b>87 482</b>
311	Food mfg .....	2	21	9	1 182	33 388	914	2 064	24 839	236 164	267 465	505 488	12 297
321	Wood product mfg .....	-	28	13	1 859	53 809	1 494	3 088	38 628	103 112	284 921	388 296	9 419
3211	Sawmills & wood preservation .....	-	10	7	1 106	35 506	829	1 777	23 956	74 786	217 901	293 907	6 056
32111	Sawmills & wood preservation .....	-	10	7	1 106	35 506	829	1 777	23 956	74 786	217 901	293 907	6 056
321113	Sawmills .....	-	9	6	f	D	D	D	D	D	D	D	D
3219	Other wood product mfg ...	-	16	5	f	D	D	D	D	D	D	D	D
32191	Millwork .....	-	12	5	561	13 178	511	1 000	11 175	23 406	32 368	55 568	D
322	Paper mfg .....	-	11	6	870	39 444	646	1 286	28 331	94 251	173 230	269 972	D
3221	Pulp, paper, & paperboard mills .....	-	2	2	f	D	D	D	D	D	D	D	D
32213	Paperboard mills .....	-	2	2	f	D	D	D	D	D	D	D	D
322130	Paperboard mills .....	-	2	2	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	3	17	10	738	22 850	605	1 228	16 332	59 262	73 966	133 619	11 437
3261	Plastics product mfg .....	3	16	10	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	15	8	755	26 008	594	1 257	17 828	76 445	69 336	144 879	5 183
331	Primary metal mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
3315	Foundries .....	-	4	2	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>TACOMA, WA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	1	39	11	648	22 673	501	1 008	15 569	40 488	35 003	75 142	2 290
336	Transportation equipment mfg .....	1	23	12	g	D	D	D	D	D	D	D	4 982
	<b>TOPPENISH, WA</b>												
31-33	<b>Manufacturing ....</b>	—	4	2	f	D	D	D	D	D	D	D	D
	<b>TUKWILA, WA</b>												
31-33	<b>Manufacturing ....</b>	3	93	37	2 645	91 702	1 829	3 494	52 052	200 283	209 626	406 090	8 726
	<b>TUMWATER, WA</b>												
31-33	<b>Manufacturing ....</b>	—	31	13	958	28 452	728	1 384	18 500	97 705	157 846	252 313	18 148
	<b>UNION GAP, WA</b>												
31-33	<b>Manufacturing ....</b>	1	20	12	885	23 996	716	1 242	16 225	50 889	92 956	146 047	6 425
	<b>VANCOUVER, WA</b>												
31-33	<b>Manufacturing ....</b>	—	193	74	13 073	494 024	10 504	20 872	355 323	1 316 796	1 229 854	2 515 908	D
311	Food mfg .....	—	11	4	931	39 205	750	1 686	21 836	155 875	178 285	333 201	D
3119	Other food mfg .....	—	2	1	f	D	D	D	D	D	D	D	D
31191	Snack food mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
311919	Other snack food mfg ..	—	1	1	f	D	D	D	D	D	D	D	D
322	Paper mfg .....	—	10	9	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	—	10	9	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	—	10	7	632	18 635	364	741	9 647	36 612	31 688	69 296	D
3261	Plastics product mfg .....	—	10	7	632	18 635	364	741	9 647	36 612	31 688	69 296	D
32619	Other plastics product mfg .....	—	6	5	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	—	6	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	—	33	14	1 140	34 546	892	1 654	24 294	66 178	53 237	118 901	D
333	Machinery mfg .....	—	22	5	831	31 827	468	824	14 194	52 400	59 655	115 519	D
334	Computer & electronic product mfg .....	—	12	7	i	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg .....	—	1	1	h	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	—	1	1	h	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	—	1	1	h	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	—	4	3	h	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	—	4	3	h	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	—	1	1	g	D	D	D	D	D	D	D	D
334414	Electronic capacitor mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>WALLA WALLA, WA</b>												
31-33	<b>Manufacturing ....</b>	1	43	9	1 137	31 234	928	1 829	21 799	95 598	57 016	154 668	4 536
	<b>WASHOUGAL, WA</b>												
31-33	<b>Manufacturing ....</b>	1	25	14	929	27 243	691	1 169	17 908	59 568	106 220	168 164	3 574
	<b>WENATCHEE, WA</b>												
31-33	<b>Manufacturing ....</b>	1	32	7	621	13 496	520	954	10 041	42 191	29 282	71 571	1 170
	<b>WOODINVILLE, WA *</b>												
31-33	<b>Manufacturing ....</b>	—	86	28	1 832	56 356	1 223	2 237	27 677	227 282	161 853	363 842	31 479

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>WOODLAND, WA *</b>												
31-33	Manufacturing ....	-	17	9	810	26 285	561	1 216	15 517	77 762	102 061	181 174	3 174
	<b>YAKIMA, WA</b>												
31-33	Manufacturing ....	-	102	34	4 624	123 996	3 513	6 815	85 724	320 084	430 304	747 679	38 129
311	Food mfg.....	-	6	4	625	14 394	596	1 167	11 430	51 725	53 743	105 594	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	3	3	f	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying.....	-	3	3	f	D	D	D	D	D	D	D	D
311421	Fruit & vegetable canning.....	-	2	2	f	D	D	D	D	D	D	D	D
321	Wood product mfg.....	-	10	5	566	17 198	501	984	14 715	28 777	107 716	134 869	D
326	Plastics & rubber products mfg.....	-	6	4	861	23 927	703	1 530	16 543	62 376	86 244	147 774	D
3261	Plastics product mfg.....	-	6	4	861	23 927	703	1 530	16 543	62 376	86 244	147 774	D
332	Fabricated metal product mfg.....	-	13	3	518	16 401	302	534	10 683	32 786	17 664	49 509	1 843
333	Machinery mfg.....	8	12	3	594	14 701	346	463	7 018	32 315	27 672	60 122	2 166

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

<sup>2</sup>Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c-100 to 249 employees; e-250 to 499 employees; f-500 to 999 employees; g-1,000 to 2,499 employees; h-2,500 to 4,999 employees; i-5,000 to 9,999 employees; j-10,000 to 24,999 employees; k-25,000 to 49,999 employees; l-50,000 to 99,999 employees; m-100,000 employees or more.

**Table 5. Detailed Statistics for the State: 1997**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
<b>WASHINGTON</b>		<b>WASHINGTON—Con.</b>	
Companies <sup>1</sup> .....	7 396	Quantity of electricity purchased for heat and power .....	1,000 kWh.. 35 770 643
All establishments .....	7 801	Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 1 032 478
Establishments with 1 to 19 employees .....	5 642	Total value of shipments .....	\$1,000.. 78 852 486
Establishments with 20 to 99 employees .....	1 586	Value of resales .....	\$1,000.. 2 910 220
Establishments with 100 employees or more .....	573	Value added .....	\$1,000.. 30 434 838
All employees .....	328 511	Total inventories, beginning of year .....	\$1,000.. 17 679 809
Total compensation <sup>2</sup> .....	\$1,000.. 16 068 448	Finished goods inventories, beginning of year .....	\$1,000.. 2 558 362
Annual payroll .....	\$1,000.. 13 004 063	Work-in-process inventories, beginning of year .....	\$1,000.. 12 243 713
Total fringe benefits .....	\$1,000.. 3 064 385	Materials and supplies inventories, beginning of year .....	\$1,000.. 2 877 734
Production workers, average for year .....	213 330	Total inventories, end of year .....	\$1,000.. 18 978 031
Production workers on March 12 .....	207 630	Finished goods inventories, end of year .....	\$1,000.. 2 764 436
Production workers on May 12 .....	211 130	Work-in-process inventories, end of year .....	\$1,000.. 12 666 104
Production workers on August 12 .....	215 548	Materials and supplies inventories, end of year .....	\$1,000.. 3 547 491
Production workers on November 12 .....	219 012	Gross book value of total assets at beginning of year .....	\$1,000.. 34 258 096
Production-worker hours .....	1,000.. 425 003	Total capital expenditures (new and used) .....	\$1,000.. 2 640 230
Production-worker wages .....	\$1,000.. 7 046 371	Capital expenditures for buildings and other structures (new and used) .....	\$1,000.. 694 020
Total cost of materials .....	\$1,000.. 49 023 723	Capital expenditures for machinery and equipment (new and used) .....	\$1,000.. 1 946 210
Cost of materials, parts, containers, etc., consumed .....	\$1,000.. 44 006 071	Total retirements <sup>2</sup> .....	\$1,000.. 935 405
Cost of resales .....	\$1,000.. 2 476 282	Gross book value of total assets at end of year .....	\$1,000.. 35 962 921
Cost of fuels .....	\$1,000.. 346 903	Total depreciation during year <sup>2</sup> .....	\$1,000.. 2 230 595
Cost of purchased electricity .....	\$1,000.. 984 399	Total rental payments <sup>2</sup> .....	\$1,000.. 545 475
Cost of contract work .....	\$1,000.. 1 210 068	Buildings and other structures rental payments <sup>2</sup> .....	\$1,000.. 300 584
		Machinery and equipment rental payments <sup>2</sup> .....	\$1,000.. 244 891

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>These items are collected in the ASM and estimated for the remaining establishments.

# Appendix A.

## Explanation of Terms

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### **BEGINNING- AND END-OF-YEAR INVENTORIES**

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

### **Inventory Data by Stage of Fabrication**

Total inventories and three detailed components (1) finished goods, (2) work-in-process, and (3) materials, supplies, fuels, etc., were collected.

When using inventory data by stage of fabrication for “all industries” and at the three-digit subsector level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by an establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for all publication levels.

### **COST OF MATERIALS**

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

Included in this item are:

1. Cost of parts, components, containers, etc.—Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
2. Cost of products bought and sold in the same condition.

3. Cost of fuels consumed for heat and power—Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. Cost of purchased electricity—The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
5. Cost of contract work—This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term “Contract Work” refers to the fee a company pays to another company to perform a service.

### **Duplication in Cost of Materials and Value of Shipment**

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual

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manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

### **DEPRECIATION CHARGES FOR FIXED ASSETS**

This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

### **EMPLOYEES**

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

#### **Production Workers**

This item includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

#### **All Other Employees**

This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria,

medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force.

### **FRINGE BENEFITS**

Fringe benefits are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

### **GROSS BOOK VALUE OF DEPRECIABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)**

Total value of depreciable assets is collected on all census forms. It shows the value of depreciable assets for the beginning of year and end of year. The data encompass all fixed depreciable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

### **NUMBER OF ESTABLISHMENTS AND COMPANIES**

A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location

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where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

### **PAYROLL**

This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

### **PRODUCTION-WORKER HOURS**

This item covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave.

### **QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER**

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the

Annual Survey of Manufactures (ASM) form. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

### **RENTAL PAYMENTS**

Total rental payments are collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

### **RETIREMENTS OF DEPRECIABLE ASSETS**

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

### **TOTAL CAPITAL EXPENDITURES (NEW AND USED)**

For establishments in operation and any known plants under construction, manufacturers were asked to report their new and used expenditures for (1) permanent additions and major alterations to manufacturing establishments and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

Totals for expenditures include the costs of assets leased from nonmanufacturing concerns through capital leases. New facilities owned by the Federal Government but operated under contract by private companies and

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plant and equipment furnished to the manufacturer by communities and nonprofit organizations are excluded. Also excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

### **VALUE ADDED**

This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning- and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

“Value added” avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

### **VALUE OF SHIPMENTS**

This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all items made by or for the establishments from material owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for NAICS defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of product shipments:

1. Reported contract work—Receipts for work or services that a plant performed for others on their materials.
2. Value of resales—Sales of products brought and sold without further manufacture, processing, or assembly.
3. Other miscellaneous receipts—Such as repair work, installation, sales of scrap, etc.

### **Duplication in Cost of Materials and Value of Shipment**

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

# Appendix B.

## NAICS Codes, Titles, and Descriptions

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### SECTOR 31-33 MANUFACTURING

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership.

The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working

machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS: milk bottling and pasteurizing; water bottling and processing; fresh fish packaging (oyster shucking, fish filleting); apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others; printing and related activities; ready-mixed concrete production; leather converting; grinding of lenses to prescription; wood preserving; electroplating, plating, metal heat treating, and polishing for the trade; lapidary work for the trade; fabricating signs and advertising displays; rebuilding or remanufacturing machinery (i.e., automotive parts); ship repair and renovation; machine shops; and tire retreading.

Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include:

1. Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting, is considered a harvesting operation;
2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining;

3. The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction;
4. Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and
5. Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

### **311 Food Manufacturing**

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

The food products manufactured in these establishments are typically sold to wholesalers or retailers for distribution to consumers, but establishments primarily engaged in retailing bakery and candy products made on the premises not for immediate consumption are included.

Establishments primarily engaged in manufacturing beverages are classified in Subsector 312, Beverage and Tobacco Product Manufacturing.

#### **3111 Animal Food Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31111, Animal Food Manufacturing.

##### **31111 Animal Food Manufacturing**

This industry comprises establishments primarily engaged in manufacturing food and feed for animals from ingredients, such as grains, oilseed mill products, and meat products.

##### **311111 Dog and Cat Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing dog and cat food from ingredients, such as grains, oilseed mill products, and meat products.

The data published with NAICS code 311111 include the following SIC industry:

2047 Dog and cat food

#### **311119 Other Animal Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing animal food (except dog and cat) from ingredients, such as grains, oilseed mill products, and meat products.

The data published with NAICS code 311119 include the following SIC industry:

2048 Prepared feeds and feed ingredients for animals and fowls, except dogs and cats (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311119 do not include establishments primarily engaged in the custom grinding of grain. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3112 Grain and Oilseed Milling**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31121, Flour Milling and Malt Manufacturing; 31122, Starch and Vegetable Fats and Oils Manufacturing; and 31123, Breakfast Cereal Manufacturing.

##### **31121 Flour Milling and Malt Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) milling flour or meal from grains or vegetables; (2) preparing flour mixes or doughs from flour milled in the same establishment; (3) milling, cleaning, and polishing rice; and (4) manufacturing malt from barley, rye, or other grains.

##### **311211 Flour Milling**

This U.S. industry comprises establishments primarily engaged in (1) milling flour or meal from grains (except rice) or vegetables and/or (2) milling flour and preparing flour mixes or doughs.

The data published with NAICS code 311211 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soup mixes (pt)

2041 Flour and other grain mill products

##### **311212 Rice Milling**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) milling rice; (2) cleaning and polishing rice; or (3) milling, cleaning, and polishing rice. The establishments in this industry may package the rice they mill with other ingredients.

The data published with NAICS code 311212 include the following SIC industry:

2044 Rice milling

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311212 do not include rice mills primarily engaged in packaging uncooked rice with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **311213 Malt Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing malt from barley, rye, or other grains.

The data published with NAICS code 311213 include the following SIC industry:

2083 Malt

### **31122 Starch and Vegetable Fats and Oils Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) wet milling corn and vegetables; (2) crushing oilseeds and tree nuts; (3) refining and/or blending vegetable oils; (4) manufacturing shortening and margarine; and (5) blending purchased animal fats with vegetable fats.

#### **311221 Wet Corn Milling**

This U.S. industry comprises establishments primarily engaged in wet milling corn and other vegetables (except to make ethyl alcohol). Examples of products made in these establishments are corn sweeteners, such as glucose, dextrose, and fructose; corn oil; and starches (except laundry).

The data published with NAICS code 311221 include the following SIC industry:

2046 Wet corn milling

#### **311222 Soybean Processing**

This U.S. industry comprises establishments engaged in crushing soybeans. Examples of products produced in these establishments are soybean oil, soybean cake and meal, and soybean protein isolates and concentrates.

The data published with NAICS code 311222 include the following SIC industry:

2075 Soybean oil mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311222 do not include establishments primarily engaged in the processing of

soybean oil from soybeans crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311223 Other Oilseed Processing**

This U.S. industry comprises establishments engaged in crushing oilseeds (except soybeans) and tree nuts, such as cottonseeds, linseeds, peanuts, and sunflower seeds.

The data published with NAICS code 311223 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311223 do not include establishments primarily engaged in the processing of vegetable oils, except soybean oil, from oilseeds crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311225 Fats and Oils Refining and Blending**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing shortening and margarine from purchased fats and oils; (2) refining and/or blending vegetable, oilseed, and tree nut oils from purchased oils; and (3) blending purchased animal fats with purchased vegetable fats.

The data published with NAICS code 311225 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2075 Soybean oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

2077 Animal and marine fats and oil (pt)

2079 Shortening and cooking oils

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311225 do not include establishments primarily engaged in refining and/or blending corn oil from purchased oil. The data include establishments primarily engaged in the manufacture of vegetable oil foots. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31123 Breakfast Cereal Manufacturing**

This industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

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### **311230 Breakfast Cereal Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

The data published with NAICS code 311230 include the following SIC industry:

2043 Cereal breakfast foods (pt)

### **3113 Sugar and Confectionery Product Manufacturing**

This industry group comprises (1) establishments that process agricultural inputs, such as sugarcane, beet, and cacao, to give rise to a new product (sugar or chocolate) and (2) those that begin with sugar and chocolate and process these further.

#### **31131 Sugar Manufacturing**

This industry comprises establishments primarily engaged in manufacturing raw sugar, liquid sugar, and refined sugar from sugarcane, raw cane sugar and sugarbeets.

##### **311311 Sugarcane Mills**

This U.S. industry comprises establishments primarily engaged in processing sugarcane.

The data published with NAICS code 311312 include the following SIC industry:

2061 Raw cane sugar

##### **311312 Cane Sugar Refining**

This U.S. industry comprises establishments primarily engaged in refining cane sugar from raw cane sugar.

The data published with NAICS code 311312 include the following SIC industry:

2062 Cane sugar refining

##### **311313 Beet Sugar Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing refined beet sugar from sugarbeets

The data published with NAICS code 311313 include the following SIC industry:

2063 Beet sugar

### **31132 Chocolate and Confectionery Manufacturing From Cacao Beans**

This industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

### **311320 Chocolate and Confectionery Manufacturing From Cacao Beans**

This U.S. industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

The data published with NAICS code 311320 include the following SIC industries:

2066 Chocolate and cocoa products

#### **31133 Confectionery Manufacturing From Purchased Chocolate**

This industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

##### **311330 Confectionery Manufacturing From Purchased Chocolate**

This U.S. industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

The data published with NAICS code 311330 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

5441 Candy, nut, and confectionery stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311330 do not include establishments primarily engaged in the manufacture of chocolate products made from purchased chocolate. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **3113301 Chocolate and Chocolate-type Confectionery Retail – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products not for immediate consumption made on the premises from chocolate produced elsewhere.

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### **3113302 Chocolate and Chocolate-type Confectionery – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products from chocolate produced elsewhere.

### **31134 Nonchocolate Confectionery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primary engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

### **311340 Nonchocolate Confectionery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primary engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

The data published with NAICS code 311340 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

2099 Food preparations, n.e.c. (pt)

5441 Candy, nut, and confectionery stores (pt)

### **3113401 Nonchocolate-Type Confectionery Products Retail – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup, not for immediate consumption made on the premises.

### **3113402 Nonchocolate-Type Confectionery Products – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup.

### **3114 Fruit and Vegetable Preserving and Specialty Food Manufacturing**

This industry group includes (1) establishments that freeze food and (2) those that use preservation processes, such as pickling, canning, and dehydrating. Both types begin their production process with inputs of vegetable or animal origin.

### **31141 Frozen Food Manufacturing**

This industry comprises establishments primarily engaged in manufacturing frozen fruit, frozen juices, frozen vegetables, and frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped toppings; and frozen waffles, pancakes, and french toast.

### **311411 Frozen Fruit, Juice, and Vegetable Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing frozen fruits; frozen vegetables; and frozen fruit juices, –ades, drinks, cocktail mixes and concentrates.

The data published with NAICS code 311411 include the following SIC industry:

2037 Frozen fruits and vegetables

### **311412 Frozen Specialty Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped topping; and frozen waffles, pancakes, and french toast.

The data published with NAICS code 311412 include the following SIC industry:

2038 Frozen specialties, n.e.c.

### **31142 Fruit and Vegetable Canning, Pickling, and Drying**

This industry comprises establishments primarily engaged in manufacturing canned, pickled, and dried fruits, vegetables, and specialty foods. Establishments in this industry may package the dried or dehydrated ingredients they make with other purchased ingredients. Examples of products made by these establishments are canned juices; canned baby foods; canned soups (except seafood); canned dry beans; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste, pickles, relishes, jams and jellies, dried soup mixes and bullions, and sauerkraut.

### **311421 Fruit and Vegetable Canning**

This U.S. industry comprises establishments primarily engaged in manufacturing canned, pickled, and brined fruits and vegetables. Examples of products made in these establishments are canned juices; canned jams and jellies; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste; pickles, relishes, and sauerkraut.

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The data published with NAICS code 311421 include the following SIC industries:

2033 Canned fruits and vegetables

2035 Pickles, sauces, and salad dressings (pt)

### **311422 Specialty Canning**

This U.S. industry comprises establishments primarily engaged in manufacturing canned specialty foods. Examples of products made in these establishments are canned baby food, canned baked beans, canned soups (except seafood), canned spaghetti, and other canned nationality foods.

The data published with NAICS code 311422 include the following SIC industry:

2032 Canned specialties (pt)

### **311423 Dried and Dehydrated Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) drying (including freeze-dried) and/or dehydrating fruits, vegetables, and soup mixes and bouillon and/or (2) drying and/or dehydrating ingredients and packaging them with other purchased ingredients, such as rice and dry pasta.

The data published with NAICS code 311423 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soups (pt)

2099 Food preparations, n.e.c. (pt)

### **3115 Dairy Product Manufacturing**

This industry group comprises establishments that manufacture dairy products from raw milk, processed milk, and dairy substitutes.

31151 Dairy Product (Except Frozen) Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dairy products (except frozen) from raw milk and/or processed milk products; (2) manufacturing dairy substitutes (except frozen) from soybeans and other nondairy substances; and (3) manufacturing dry, condensed, concentrated, and evaporated dairy and dairy substitute products.

#### **311511 Fluid Milk Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing processed milk products, such as pasteurized milk or cream and sour cream and/or (2) manufacturing fluid milk dairy substitutes from soybeans and other nondairy substances.

The data published with NAICS code 311511 include the following SIC industry:

2026 Fluid milk

#### **311512 Creamery Butter Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing creamery butter from milk and/or processed milk products.

The data published with NAICS code 311512 include the following SIC industry:

2021 Creamery butter

#### **311513 Cheese Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cheese products (except cottage cheese) from raw milk and/or processed milk products and/or (2) manufacturing cheese substitutes from soybean and other nondairy substances.

The data published with NAICS code 311513 include the following SIC industry:

2022 Cheese, natural and processed

#### **311514 Dry, Condensed, and Evaporated Dairy Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing dry, condensed, and evaporated milk and dairy substitute products.

The data published with NAICS code 311514 include the following SIC industry:

2023 Dry, condensed and evaporated milk

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311514 do not include establishments primarily engaged in the manufacture of fluid milk processed with ultra-high temperature. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31152 Ice Cream and Frozen Dessert Manufacturing**

This industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

#### **311520 Ice Cream and Frozen Dessert Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

The data published with NAICS code 311520 include the following SIC industry:

2024 Ice cream and frozen desserts

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## **3116 Meat Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31161, Animal Slaughtering and Processing.

### **31161 Animal Slaughtering and Processing**

This industry comprises establishments primarily engaged in one or more of the following: (1) slaughtering animals; (2) preparing processed meats and meat byproducts; and (3) rendering and/or refining animal fat, bones, and meat scraps. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased carcasses.

#### **311611 Animal (Except Poultry) Slaughtering**

This U.S. industry comprises establishments primary engaged in slaughtering animals (except poultry and small game). Establishments that slaughter and prepare meats are included in this industry.

The data published with NAICS code 311611 include the following SIC industries:

2011 Meat packing plants

2048 Prepared feeds, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311611 do not include establishments primarily engaged in custom slaughtering. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311612 Meat Processed From Carcasses**

This U.S. industry comprises establishments primarily engaged in processing or preserving meat and meat byproducts (except poultry and small game) from purchased meats. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased meats.

The data published with NAICS code 311612 include the following SIC industries:

2013 Sausages and other prepared meats

5147 Meat and meat products (pt)

#### **311613 Rendering and Meat Byproduct Processing**

This U.S. industry comprises establishments primarily engaged in rendering animal fat, bones, and meat scraps.

The data published with NAICS code 311613 include the following SIC industry:

2077 Animal and marine fats and oil (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311613 do not include establishments primarily engaged in manufacturing lard from purchased materials. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **311615 Poultry Processing**

This U.S. industry comprises establishments primarily engaged in (1) slaughtering poultry and small game and/or (2) preparing processed poultry and small game meat and meat byproducts.

The data published with NAICS code 311615 include the following SIC industry:

2015 Poultry and egg processing (pt)

### **3117 Seafood Product Preparation and Packaging**

This NAICS industry group includes establishments classified in NAICS Industry 31171, Seafood Product Preparation and Packaging.

#### **31171 Seafood Product Preparation and Packaging**

This industry comprises establishments primarily engaged in one or more of the following: (1) canning seafood (including soup); (2) smoking, salting, and drying seafoods; (3) eviscerating fresh fish by removing heads, fins, scales, bones, and entrails; (4) shucking and packing fresh shellfish; (5) processing marine fats and oils; and (6) freezing seafood. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

##### **311711 Seafood Canning**

This U.S. industry comprises establishments primarily engaged in (1) canning seafood (including soup) and marine fats and oils and/or (2) smoking, salting, and drying seafoods. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

The data published with NAICS code 311711 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2091 Canned and cured seafood

##### **311712 Fresh and Frozen Seafood Processing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) eviscerating fresh fish by removing heads, fins, scales, bones, and

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entrails; (2) shucking and packing fresh shellfish; (3) manufacturing frozen seafood; and (4) processing fresh and frozen marine fats and oils.

The data published with NAICS code 311712 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2092 Prepared fresh or frozen fish and seafood

### **3118 Bakeries and Tortilla Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31181, Bread and Bakery Product Manufacturing; 31182, Cookie, Cracker, and Pasta Manufacturing; and 31183, Tortilla Manufacturing.

#### **31181 Bread and Bakery Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and other bakery products.

##### **311811 Retail Bakeries**

This U.S. industry comprises establishments primarily engaged in retailing bread and other bakery products not for immediate consumption made on the premises from flour, not from prepared dough.

The data published with NAICS code 311811 include the following SIC industry:

5461 Retail bakeries (pt)

##### **311812 Commercial Bakeries**

This U.S. industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and bread-type rolls and other fresh bakery (except cookies and crackers) products.

The data published with NAICS code 311812 include the following SIC industries:

2051 Bread, cake, and related products

2052 Cookies and crackers (pt)

##### **311813 Frozen Cakes, Pies, and Other Pastries Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing frozen bakery products (except bread), such as cakes, pies, and doughnuts.

The data published with NAICS code 311813 include the following SIC industry:

2053 Frozen bakery products, except bread

##### **31182 Cookie, Cracker, and Pasta Manufacturing**

This industry comprises establishments primarily engaged in one of the following: (1) manufacturing cookies and crackers; (2) preparing flour and dough mixes and

dough from flour ground elsewhere; and (3) manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

##### **311821 Cookie and Cracker Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cookies, crackers, and other products, such as ice cream cones.

The data published with NAICS code 311821 include the following SIC industry:

2052 Cookies and crackers (pt)

##### **311822 Flour Mixes and Dough Manufacturing From Purchased Flour**

This U.S. industry comprises establishments primarily engaged in manufacturing prepared flour mixes or dough mixes from flour ground elsewhere.

The data published with NAICS code 311822 include the following SIC industries:

2045 Blended and prepared flour

##### **311823 Dry Pasta Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

The data published with NAICS code 311823 include the following SIC industry:

2098 Macaroni and spaghetti

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311823 do not include dry pasta plants primarily engaged in packaging dry pasta with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **31183 Tortilla Manufacturing**

This industry comprises establishments primarily engaged in manufacturing tortillas.

##### **311830 Tortilla Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing tortillas.

The data published with NAICS code 311830 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

### **3119 Other Food Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruit, vegetable, and specialty foods; dairy products; meat products; seafood products; and bakeries and tortillas). The industry group includes industries with different productive processes, such as snack food manufacturing; coffee and tea manufacturing; concentrate, syrup, condiment, and spice manufacturing; and, in general, an entire range of other miscellaneous food product manufacturing.

#### **31191 Snack Food Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; (3) manufacturing peanut butter; and (4) manufacturing potato chips, corn chips, popped popcorn, pretzels (except soft), pork rinds, and similar snacks.

##### **311911 Roasted Nuts and Peanut Butter Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; and (3) manufacturing peanut butter.

The data published with NAICS code 311911 include the following SIC industries:

2068 Salted and roasted nuts and seeds

2099 Food preparations, n.e.c. (pt)

##### **311919 Other Snack Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing snack foods (except roasted nuts and peanut butter).

The data published with NAICS code 311919 include the following SIC industries:

2052 Cookies and crackers (pt)

2096 Potato chips and similar snacks

#### **31192 Coffee and Tea Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

#### **311920 Coffee and Tea Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

The data published with NAICS code 311920 include the following SIC industries:

2043 Cereal breakfast foods (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311920 do not include establishments primarily engaged in the manufacture of coffee flavorings and syrups. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **31193 Flavoring Syrup and Concentrate Manufacturing**

This industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

##### **311930 Flavoring Syrup and Concentrate Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

The data published with NAICS code 311930 include the following SIC industry:

2087 Flavoring extracts and syrups, n.e.c. (pt)

##### **31194 Seasoning and Dressing Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dressings and sauces, such as mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravies); (2) manufacturing spices, table salt, seasoning, and flavoring extracts (except coffee and meat), and natural food colorings; and (3) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

### **311941 Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravy).

The data published with NAICS code 311941 include the following SIC industries:

2035 Pickles, sauces, and salad dressings (pt)

2099 Food preparations, n.e.c.(pt)

### **311942 Spice and Extract Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing spices, table salt, seasonings, flavoring extracts (except coffee and meat), and natural food colorings and/or (2) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

The data published with NAICS code 311942 include the following SIC industries:

2087 Flavoring extracts and syrups, n.e.c. (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311942 include establishments primarily engaged in the manufacture of coffee extracts but do not include establishments primarily engaged in the manufacture of malt extract. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **31199 All Other Food Manufacturing**

This industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakeries and tortillas; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings; and dressings). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

### **311991 Perishable Prepared Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing perishable prepared foods, such as salads, sandwiches, prepared meals, fresh pizza, fresh pasta, and peeled or cut vegetables.

The data published with NAICS code 311991 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

### **311999 All Other Miscellaneous Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakeries and tortillas; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings and dressings; and perishable prepared food). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

The data published with NAICS code 311999 include the following SIC industries:

2015 Poultry slaughtering and processing (pt)

2032 Canned specialties (pt)

2087 Flavoring extracts and syrups, n.e.c. (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311999 do not include establishments primarily engaged in the manufacture of soup mixes from purchased dehydrated ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **312 Beverage and Tobacco Product Manufacturing**

Industries in the Beverage and Tobacco Product Manufacturing subsector manufacture beverages and tobacco products. The industry group, Beverage Manufacturing, includes three types of establishments: (1) those that manufacture nonalcoholic beverages; (2) those that manufacture alcoholic beverages through the fermentation process; and (3) those that produce distilled alcoholic beverages. Ice manufacturing, while not a beverage, is included with nonalcoholic beverage manufacturing because it uses the same production process as water purification.

In the case of activities related to the manufacture of beverages, the structure follows the defined productive processes. Brandy, a distilled beverage, was not placed

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under distillery product manufacturing, but rather under the NAICS class for winery product manufacturing since the productive process used in the manufacturing of alcoholic grape-based beverages produces both wines (fermented beverage) and brandies (distilled beverage).

The industry group, Tobacco Manufacturing, includes two types of establishments: (1) those engaged in redrying and stemming tobacco and (2) those that manufacture tobacco products, such as cigarettes and cigars.

### **3121 Beverage Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31211, Soft Drink and Ice Manufacturing; 31212, Breweries; 31213, Wineries; and 31214, Distilleries.

#### **31211 Soft Drink and Ice Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing soft drinks; (2) manufacturing ice; and (3) purifying and bottling water.

##### **312111 Soft Drink Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing soft drinks and artificially carbonated waters.

The data published with NAICS code 312111 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

##### **312112 Bottled Water Manufacturing**

This U.S. industry comprises establishments primarily engaged in purifying and bottling water (including naturally carbonated).

The data published with NAICS code 312112 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312112 do not include establishments primarily engaged in the bottling of mineral or spring water. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **312113 Ice Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ice.

The data published with NAICS code 312113 include the following SIC industry:

2097 Manufactured ice

### **31212 Breweries**

This industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

#### **312120 Breweries**

This U.S. industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

The data published with NAICS code 312120 include the following SIC industry:

2082 Malt beverages

#### **31213 Wineries**

This industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

##### **312130 Wineries**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

The data published with NAICS code 312130 include the following SIC industry:

2084 Wines, brandy, and brandy spirits

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312130 do not include establishments primarily engaged in the manufacture of applejack. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31214 Distilleries**

This industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

##### **312140 Distilleries**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

The data published with NAICS code 312140 include the following SIC industry:

2085 Distilled liquor, except brandy

## **3122 Tobacco Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31221, Tobacco Stemming and Redrying; and 31222, Tobacco Product Manufacturing.

### **31221 Tobacco Stemming and Redrying**

This industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

### **312210 Tobacco Stemming and Redrying**

This U.S. industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

The data published with NAICS code 312210 include the following SIC industry:

2141 Tobacco stemming and redrying (pt)

### **31222 Tobacco Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing cigarettes, cigars, smoking and chewing tobacco, and reconstituted tobacco.

### **312221 Cigarette Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cigarettes.

The data published with NAICS code 312221 include the following SIC industries:

2111 Cigarettes

### **312229 Other Tobacco Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing tobacco products (except cigarettes).

The data published with NAICS code 312229 include the following SIC industries:

2121 Cigars

2131 Chewing and smoking tobacco

2141 Tobacco stemming and redrying (pt)

## **313 Textile Mills**

Industries in the Textile Mills subsector group establishments that transform a basic fiber (natural or synthetic) into a product, such as yarn or fabric, that is further manufactured into usable items, such as apparel, sheets and towels, and textile bags for individual or industrial consumption. The further manufacturing may be performed in the same establishment and classified in this subsector, or it may be performed at a separate establishment and be classified elsewhere in manufacturing.

The main processes in this subsector include preparation and spinning of fiber, knitting or weaving of fabric, and the finishing of the textile. The NAICS structure follows and captures this process flow. Major industries in this flow, such as preparation of fibers, weaving of fabric, knitting of fabric, and fiber and fabric finishing, are uniquely identified. Texturizing, throwing, twisting, and winding of yarn contains aspects of both fiber preparation and fiber finishing and is classified with preparation of fibers rather than with finishing of fibers.

NAICS separates the manufacturing of primary textiles and the manufacturing of textile products (except apparel) when the textile product is produced from purchased primary textiles, such as fabric. The manufacturing of textile products (except apparel) from purchased fabric is classified in Subsector 314, Textile Product Mills, and apparel from purchased fabric is classified in Subsector 315, Apparel Manufacturing.

Excluded from this subsector are establishments that weave or knit fabric and make garments. These establishments are included in Subsector 315, Apparel Manufacturing.

## **3131 Fiber, Yarn, and Thread Mills**

This NAICS industry group includes establishments classified in NAICS Industry 31311, Fiber, Yarn, and Thread Mills.

### **31311 Fiber, Yarn, and Thread Mills**

This industry comprises establishments primarily engaged in one or more of the following: (1) spinning yarn; (2) manufacturing thread of any fiber; (3) texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments; and (4) producing hemp yarn and further processing into rope or bags.

### **313111 Yarn Spinning Mills**

This U.S. industry comprises establishments primarily engaged in spinning yarn from any fiber and/or producing hemp yarn and further processing into rope or bags.

The data published with NAICS code 313111 include the following SIC industries:

2281 Yarn spinning mills

2299 Textile goods, n.e.c. (pt)

### **313112 Yarn Texturizing, Throwing, and Twisting Mills**

This U.S. industry comprises establishments primarily engaged in texturizing, throwing, twisting, spooling, or winding purchased yarns or manmade fiber filaments.

The data published with NAICS code 313112 include the following SIC industry:

2282 Yarn throwing and winding mills (pt)

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### **3131121 Yarn Texturing, Throwing, and Twisting Mills – Manufacturer**

Establishments primarily engaged in texturing, throwing, twisting, spooling, or winding purchased yarns or manmade filaments.

### **3131122 Yarn Texturing, Throwing, and Twisting Mills – Commission Finisher**

Establishments primarily engaged in throwing, twisting, spooling, or winding yarns or manmade filaments on a commission basis.

### **3131113 Thread Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing thread (e.g., sewing, hand-knitting, crochet) of all fibers.

The data published with NAICS code 313113 include the following SIC industries:

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

### **3132 Fabric Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31321, Broadwoven Fabric Mills; 31322, Narrow Fabric Mills and Schiffli Machine Embroidery; 31323, Nonwoven Fabric Mills; and 31324, Knit Fabric Mills.

#### **31321 Broadwoven Fabric Mills**

This industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

#### **313210 Broadwoven Fabric Mills**

This U.S. industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

The data published with NAICS code 313210 include the following SIC industries:

2211 Weaving mills, cotton

2221 Weaving mills, synthetics

2231 Weaving and finishing mills, wool (pt)

2299 Textile goods, n.e.c. (pt)

### **31322 Narrow Fabric Mills and Schiffli Machine Embroidery**

This industry comprises establishments primarily engaged in one or more of the following: (1) weaving or braiding narrow fabrics; (2) manufacturing Schiffli machine embroideries; and (3) making fabric-covered elastic yarn and thread.

#### **313221 Narrow Fabric Mills**

This U.S. industry comprises establishments primarily engaged in (1) weaving or braiding narrow fabrics in their final form or initially made in wider widths that are specially constructed for narrower widths and/or (2) making fabric-covered elastic yarn and thread. Establishments in this industry may weave only; weave and finish; or weave, finish, and further fabricate fabric products

The data published with NAICS code 313221 include the following SIC industries:

2241 Narrow fabric mills

2299 Textile goods, n.e.c. (pt)

#### **313222 Schiffli Machine Embroidery**

This U.S. industry comprises establishments primarily engaged in manufacturing Schiffli machine embroideries.

The data published with NAICS code 313222 include the following SIC industry:

2397 Schiffli machine embroideries

#### **31323 Nonwoven Fabric Mills**

This industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

#### **313230 Nonwoven Fabric Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

The data published with NAICS code 313230 include the following SIC industries:

2297 Nonwoven fabrics

2299 Textile goods, n.e.c. (pt)

#### **31324 Knit Fabric Mills**

This industry comprises establishments primarily engaged in one of the following: (1) knitting weft (i.e., circular) and warp (i.e., flat) fabric; (2) knitting and finishing

weft and warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, and finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

### **313241 Weft Knit Fabric Mills**

This U.S. industry comprises establishments primarily engaged in knitting weft (i.e., circular) fabric or knitting and finishing weft fabric. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

The data published with NAICS code 313241 include the following SIC industry:

2257 Circular knit fabric mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313241 do not include establishments primarily engaged in the manufacture of articles of weft knit fabric. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3132411 Weft Knit Fabric Mills – Manufacturer**

Establishments primarily engaged in knitting weft (i.e., circular) fabric; knitting and finishing weft fabric; or knitting, finishing, and further fabricating weft fabric products (except apparel).

### **3132412 Weft Knit Fabric Mills – Jobber**

Establishments engaged as weft knit fabric jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric or fabricated products (except apparel).

### **3132413 Weft Knit Fabric Mills – Contractor**

Establishments primarily engaged in knitting or finishing weft knit fabric or further fabricating weft knit fabric into products (except apparel) on a commission basis.

### **313249 Other Knit Fabric and Lace Mills**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting warp (i.e., flat) fabric; (2) knitting and finishing warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, or finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

The data published with NAICS code 313249 include the following SIC industries:

2258 Lace and warp knit fabric mills (pt)

2259 Knitting mills, n.e.c. (pt)

### **3132491 Other Knit Fabric and Lace Mills – Manufacturer**

Establishments primarily engaged in knitting warp (i.e., flat) fabric; knitting and finishing warp fabric; knitting, finishing, and further fabricating warp fabric products (except apparel); manufacturing lace; or manufacturing, dyeing, or finishing lace and lace goods.

### **3132492 Other Knit Fabric and Lace Mills – Jobber**

Establishments engaged as other knit fabric and lace jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric.

### **3132493 Other Knit Fabric and Lace Mills – Contractor**

Establishments primarily engaged in knitting or finishing lace and other knit fabric or further fabricating lace and other knit fabric into products (except apparel) on a commission basis.

### **3133 Textile and Fabric Finishing and Fabric Coating Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31331, Textile and Fabric Finishing Mills; and 31332, Fabric Coating Mills.

### **31331 Textile and Fabric Finishing Mills**

This industry comprises (1) establishments primarily engaged in finishing of textiles, fabrics, and apparel, and (2) establishments of converters who buy fabric goods in the grey, have them finished on contract, and sell at wholesale. Finishing operations include: bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendaring, mercerizing, and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

### **313311 Broadwoven Fabric Finishing Mills**

This U.S. industry comprises (1) establishments primarily engaged in finishing broadwoven fabrics and (2) establishments of converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), and other mechanical finishing, such as preshrinking, shrinking, sponging, calendaring, mercerizing and napping.

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The data published with NAICS code 313311 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2261 Finishing plants, cotton
- 2262 Finishing plants, synthetics
- 5131 Piece goods, notions and other dry goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313311 do not include establishments primarily engaged in the sponging of fabric for tailors and dressmakers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3133111 Broadwoven Fabric Finishing Mills – Manufacturer**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased broadwoven fabrics.

### **3133112 Broadwoven Fabric Finishing Mills – Converter**

Establishments engaged as converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale.

### **3133113 Broadwoven Fabric Finishing Mills – Commission Finisher**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of broadwoven fabrics on a commission basis.

### **313312 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills**

This U.S. industry comprises (1) establishments primarily engaged in dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) and (2) establishments of converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendering, mercerizing and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

The data published with NAICS code 313312 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2257 Circular knit fabric mills (pt)
- 2258 Lace and warp knit fabric mills (pt)

2269 Finishing plants, n.e.c.

2282 Yarn throwing and winding mills (pt)

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

5131 Piece goods, notions and other dry goods (pt)

### **3133121 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Manufacturer**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased textiles, apparel, and fabrics (except broadwoven).

### **3133122 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Converter**

Establishments engaged as converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale.

### **3133123 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Commission Finisher**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) on a commission basis.

### **31332 Fabric Coating Mills**

This industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

### **313320 Fabric Coating Mills**

This U.S. industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

The data published with NAICS code 313320 include the following SIC industries:

- 2295 Coated fabrics, not rubberized
- 3069 Fabricated rubber products, n.e.c. (pt)

### **314 Textile Product Mills**

Industries in the Textile Product Mills subsector group establishments that made textile products (except apparel). With a few exceptions, processes used in these industries are generally cut and sew (i.e., purchasing fabric and cutting and sewing to make nonapparel textile products, such as sheets and towels).

### **3141 Textile Furnishings Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31411, Carpet and Rug Mills; and 31412, Curtain and Linen Mills.

### **31411 Carpet and Rug Mills**

This industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

#### **314110 Carpet and Rug Mills**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

The data published with NAICS code 314110 include the following SIC industry:

2273 Carpets and rugs

#### **31412 Curtain and Linen Mills**

This industry comprises establishments primarily engaged in manufacturing household textile products, such as curtains, draperies, linens, bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

#### **314121 Curtain and Drapery Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing window curtains and draperies from purchased fabrics or sheet goods. The curtains and draperies may be made on a stock or custom basis for sale to individual retail customers.

The data published with NAICS code 314121 include the following SIC industries:

2391 Curtains and draperies

5714 Drapery and upholstery stores (pt)

#### **314129 Other Household Textile Product Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing household textile products (except window curtains and draperies), such as bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

The data published with NAICS code 314129 include the following SIC industry:

2392 Housefurnishings, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314129 do not include

establishments primarily engaged in the making of custom slip covers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3149 Other Textile Product Mills**

This industry group comprises establishments primarily engaged in making textile products, (except carpets and rugs, curtains and draperies, and other household textile products) from purchased materials.

#### **31491 Textile Bag and Canvas Mills**

This industry comprises establishments primarily engaged in manufacturing textile bags, awnings, tents, and related products from purchased textile fabrics.

##### **314911 Textile Bag Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing bags from purchased textile fabrics or yarns.

The data published with NAICS code 314911 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

2393 Textile bags

##### **314912 Canvas and Related Product Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing canvas and canvas-like products, such as awnings, sails, tarpaulins, and tents, from purchased fabrics.

The data published with NAICS code 314912 include the following SIC industry:

2394 Canvas and related products

### **31499 All Other Textile Product Mills**

This industry comprises establishments primarily engaged in manufacturing nonapparel textile products (except carpet, rugs, curtains, linens, bags, and canvas products) from purchased materials.

#### **314991 Rope, Cordage, and Twine Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing rope, cable, cordage, twine, and related products from all materials (e.g., abaca, sisal, henequen, hemp, cotton, paper, jute, flax, manmade fibers including glass).

The data published with NAICS code 314991 include the following SIC industry:

2298 Cordage and twine

### **314992 Tire Cord and Tire Fabric Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing cord and fabric of polyester, rayon, cotton, glass, steel, or other materials for use in reinforcing rubber tires, industrial belting, and similar uses.

The data published with NAICS code 314992 include the following SIC industry:

2296 Tire cord and fabric

### **314999 All Other Miscellaneous Textile Product Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing textile products (except carpets and rugs; curtains and linens; textile bags and canvas products; rope, cordage, and twine; and tire cord and tire fabrics) from purchased materials.

The data published with NAICS code 314999 include the following SIC industries:

2299 Textile goods, n.e.c. (pt)

2395 Pleating and stitching (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314999 include establishments primarily engaged in the manufacture of other miscellaneous textile products from SIC 3999, but do not include establishments primarily engaged in the manufacture of dust rags or textile fire hoses, or engaged in the embroidery of advertising. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **315 Apparel Manufacturing**

Industries in the Apparel Manufacturing subsector group establishments with two distinct manufacturing processes: (1) cut and sew (i.e., purchasing fabric and cutting and sewing to make a garment) and (2) the manufacture of garments in establishments that first knit fabric and then cut and sew the fabric into a garment. The Apparel Manufacturing subsector includes a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients are all included. Knitting, when done alone, is classified in the

Textile Mills subsector, but when knitting is combined with the production of complete garments, the activity is classified in Apparel Manufacturing.

### **3151 Apparel Knitting Mills**

This industry group comprises establishments primarily engaged in knitting apparel or knitting fabric and then manufacturing apparel. This industry group includes jobbers performing entrepreneurial functions involved in knitting apparel and accessories. Knitting fabric, without manufacturing apparel, is classified in Subsector 313, Textile Mills.

### **31511 Hosiery and Sock Mills**

This industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery and socks.

### **315111 Sheer Hosiery Mills**

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing women's, misses', and girls' full-length and knee-length sheer hosiery (except socks).

The data published with NAICS code 315111 include the following SIC industries:

2251 Women's hosiery, except socks

2252 Hosiery, n.e.c. (pt)

### **315119 Other Hosiery and Sock Mills**

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery (except women's, misses', and girls' sheer hosiery).

The data published with NAICS code 315119 include the following SIC industry:

2252 Hosiery, n.e.c. (pt)

### **31519 Other Apparel Knitting Mills**

This industry comprises establishments primarily engaged in one of the following: (1) knitting underwear, outerwear, and/or nightwear; (2) knitting fabric and manufacturing underwear, outerwear, and/or nightwear; or (3) knitting, manufacturing, and finishing knit underwear, outerwear, and/or nightwear.

### **315191 Outerwear Knitting Mills**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) knitting outerwear; (2) knitting fabric and manufacturing outerwear; and (3) knitting, manufacturing, and finishing knit outerwear. Examples of products made in knit outerwear mills are shirts, shorts, sweat suits, sweaters, gloves, and pants.

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The data published with NAICS code 315191 include the following SIC industries:

2253 Knit outerwear mills

2259 Knitting mills, n.e.c. (pt)

### **3151911 Outerwear Knitting Mills – Manufacturer**

Establishments primarily engaged in knitting outerwear clothing.

### **3151912 Outerwear Knitting Mills – Jobber**

Establishments engaged as knit outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **3151913 Outerwear Knitting Mills – Contractor**

Establishments primarily engaged in manufacturing knit outerwear on materials owned by others (commission basis).

### **315192 Underwear and Nightwear Knitting Mills**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting underwear and nightwear; (2) knitting fabric and manufacturing underwear and nightwear; or (3) knitting, manufacturing, and finishing knit underwear and nightwear. Examples of products produced in underwear and nightwear knitting mills are briefs, underwear T-shirts, pajamas, nightshirts, foundation garments, and panties.

The data published with NAICS code 315192 include the following SIC industries:

2254 Knit underwear mills

2259 Knitting mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315192 do not include knitting mills primarily engaged in the manufacture of bath and lounge robes. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3152 Cut and Sew Apparel Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing cut and sew apparel from woven fabric or purchased knit fabric. Included in this industry group is a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel

manufacture; and tailors, manufacturing custom garments for individual clients. Establishments weaving or knitting fabric, without manufacturing apparel, are classified in Subsector 313, Textile Mills.

### **31521 Cut and Sew Apparel Contractors**

This industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for apparel and accessories and/or (2) sewing materials owned by others for apparel and accessories.

### **315211 Men’s and Boys’ Cut and Sew Apparel Contractors**

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for men’s and boys’ apparel and/or (2) sewing materials owned by others for men’s and boys’ apparel.

The data published with NAICS code 315211 include the following SIC industries:

2311 Men’s and boys’ suits and coats (pt)

2321 Shirts, men’s and boys’ (pt)

2322 Men’s and boys’ underwear and nightwear (pt)

2325 Men’s and boys’ trousers and slacks (pt)

2326 Men’s and boys’ work clothing (pt)

2329 Men’s and boys’ clothing, n.e.c. (pt)

2341 Women’s and children’s underwear (pt)

2384 Robes and dressing gowns (pt)

2385 Waterproof outer garments (pt)

2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315211 do not include establishments primarily engaged in cut and sew contract work for men’s and boy’s neckwear, hats, shirts, other outerwear, fur goods, dress and work gloves, leather gloves and mittens, leather and sheep-lined clothing, apparel belts, or apparel and accessories, nec. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **315212 Women’s, Girls’, and Infants’ Cut and Sew Apparel Contractors**

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for women’s, girls’, and infants’ apparel and accessories and/or (2) sewing materials owned by others for women’s, girls’, and infants’ apparel and accessories.

The data published with NAICS code 315212 include the following SIC industries:

- 2331 Women's blouses and waists (pt)
- 2335 Women's dresses (pt)
- 2337 Women's suits and coats (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2341 Women's and children's underwear (pt)
- 2342 Brassieres and allied garments (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)
- 2385 Waterproof outer garments (pt)
- 2389 Apparel and accessories, n.e.c. (pt)
- 2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315212 do not include establishments primarily engaged in cut and sew contract work for women's, girls', and infants' hats; fur goods; dress and work gloves; leather gloves and mittens; leather and sheep-lined clothing; or apparel belts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **31522 Men's and Boys' Cut and Sew Apparel Manufacturing**

This industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew apparel from purchased fabric. Men's and boys' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

### **315221 Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' underwear and nightwear from purchased fabric. Men's and boys' underwear and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are briefs, bathrobes, underwear T-shirts and shorts, nightshirts, and pajamas.

The data published with NAICS code 315221 include the following SIC industries:

- 2322 Men's and boys' underwear and nightwear (pt)
- 2341 Women's and children's underwear (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)

### **315222 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric. Men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315222 include the following SIC industries:

- 2311 Men's and boys' suits and coats (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315222 do not include establishments primarily engaged in custom tailoring.

### **3152221 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric.

### **3152222 - Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing - Jobber**

Establishments engaged as men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315223 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric. Men's and boys' shirt (except

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work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex outerwear shirts, such as T-shirts and sweatshirts that are sized without specific reference to gender (i.e., adult S, M, L, XL) are included in this industry.

The data published with NAICS code 315223 include the following SIC industries:

2321 Shirts, men's and boys' (pt)

2361 Girls' and children's dresses and blouses (pt)

### **3152231 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric.

### **3152232 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Jobber**

Establishments engaged as men's and boys' shirt (except work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315224 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric. Men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315224 include the following SIC industries:

2325 Men's and boys' trousers and slacks (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

### **3152241 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric.

### **3152242 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Jobbers**

Establishments engaged as men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315225 Men's and Boys' Cut and Sew Work Clothing Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric. Men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are washable service apparel, laboratory coats, work shirts, work pants (except jeans and dungarees), and hospital apparel.

The data published with NAICS code 315225 include the following SIC industry:

2326 Men's and boys' work clothing (pt)

### **3152251 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric.

### **3152252 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Jobbers**

Establishments engaged as men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315228 Men's and Boys' Cut and Sew Other Outerwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and work clothing). Men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples,

arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex sweat-pants and similar garments that are sized without specific reference to gender (i.e., adult S, M, L, XL) are also included in this industry. Examples of products made by these establishments are athletic clothing (except athletic uniforms), bathing suits, down coats, outerwear shorts, windbreakers and jackets, and jogging suits.

The data published with NAICS code 315228 include the following SIC industries:

2329 Men's and boys' clothing, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

### **3152281 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and working clothing).

### **3152282 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Jobbers**

Establishments engaged as men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **31523 Women's and Girls' Cut and Sew Apparel Manufacturing**

This industry comprises establishments primarily engaged in manufacturing women's and girls' apparel from purchased fabric. Women's and girls' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

### **315231 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric. Women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their

materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathrobes, foundation garments, nightgowns, pajamas, panties, and slips.

The data published with NAICS code 315231 include the following SIC industries:

2341 Women's and children's underwear (pt)

2342 Brassieres and allied garments (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2384 Robes and dressing gowns (pt)

2389 Apparel and accessories, n.e.c. (pt)

### **3152311 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric.

### **3152312 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Jobbers**

Establishments engaged as women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315232 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric. Women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315232 include the following SIC industries:

2331 Women's blouses and waists (pt)

2361 Girls' and children's dresses and blouses (pt)

### **3152321 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric.

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### **3152322 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Jobbers**

Establishments engaged as women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315233 Women's and Girls' Cut and Sew Dress Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric. Women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315233 include the following SIC industries:

2335 Women's dresses (pt)

2361 Girls' and children's dresses and blouses (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315233 do not include establishments primarily engaged in custom tailoring.

### **3152331 Women's and Girls' Cut and Sew Dress Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric.

### **3152332 Women's and Girls' Cut and Sew Dress Manufacturing – Jobbers**

Establishments engaged as women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315234 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric. Women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial

functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315234 include the following SIC industries:

2337 Women's suits and coats (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

### **3152341 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric.

### **3152342 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Jobbers**

Establishments engaged as women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315239 Women's and Girls' Cut and Sew Other Outerwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts). Women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathing suits, down coats, sweaters, jogging suits, outerwear pants and shorts, and windbreakers.

The data published with NAICS code 315239 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

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### **3152391 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts).

### **3152392 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Jobbers**

Establishments engaged as women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **31529 Other Cut and Sew Apparel Manufacturing**

This industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except men's, boys', women's, and girls' apparel). This industry includes establishments manufacturing apparel, such as fur apparel, leather apparel, infants' apparel, costumes, and clerical vestments.

### **315291 Infants' Cut and Sew Apparel Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. Infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

The data published with NAICS code 315291 include the following SIC industries:

- 2341 Women's and children's underwear (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

### **3152911 Infants' Cut and Sew Apparel Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

### **3152912 Infants' Cut and Sew Apparel Manufacturing – Jobbers**

Establishments engaged as infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

### **315292 Fur and Leather Apparel Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew fur and leather apparel, and sheep-lined clothing. Fur and leather apparel jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315292 include the following SIC industries:

- 2371 Fur goods
- 2386 Leather and sheep-lined clothing

### **315299 All Other Cut and Sew Apparel Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Clothing jobbers for these products, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

The data published with NAICS code 315299 include the following SIC industries:

- 2329 Men's and boys' clothing, n.e.c. (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2389 Apparel and accessories, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315299 do not include establishments primarily engaged in the manufacture of

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waterproof rubber and plastic outerwear or rubber pants and raincoats. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3152991 All Other Cut and Sew Apparel Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

### **3152992 All Other Cut and Sew Apparel Manufacturing – Jobbers**

Establishments engaged as clothing jobbers (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel), who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel. Examples of these products are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

### **3159 Apparel Accessories and Other Apparel Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing apparel accessories and other apparel (except apparel knitting mills, apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, infants' cut and sew apparel, fur and leather apparel, and all other cut and sew apparel). This industry group includes jobbers performing entrepreneurial functions involved in manufacturing apparel accessories.

### **31599 Apparel Accessories and Other Apparel Manufacturing**

This industry comprises establishments primarily engaged in manufacturing apparel and accessories (except apparel knitting mills, cut and sew apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, and other cut and sew apparel). Jobbers, who perform entrepreneurial functions involved in apparel accessories manufacture, including buying raw materials, designing and preparing samples, arranging for

apparel accessories to be made from their materials, and marketing finished apparel accessories, are included. Examples of products made by these establishments are belts, caps, gloves (except medical, sporting, safety), hats, and neckties.

### **315991 Hat, Cap, and Millinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew hats, caps, millinery, and hat bodies from purchased fabric. Jobbers, who perform entrepreneurial functions involved in hat, cap, and millinery manufacture, including buying raw materials, designing and preparing samples, arranging for hats, caps, and millinery to be made from their materials, and marketing finished hats, caps, and millinery, are included.

The data published with NAICS code 315991 include the following SIC industry:

2353 Hats, caps, and millinery

### **315992 Glove and Mitten Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew gloves (except rubber, metal, and athletic gloves) and mittens from purchased fabric, fur, leather, or from combinations of fabric, fur, or leather. Jobbers, who perform entrepreneurial functions involved in glove and mitten manufacture, including buying raw materials, designing and preparing samples, arranging for gloves and mittens to be made from their materials, and marketing finished gloves and mittens, are included.

The data published with NAICS code 315992 include the following SIC industries:

2381 Fabric gloves and mittens

3151 Leather gloves and mittens

### **315993 Men's and Boys' Neckwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew neckties, scarves, and mufflers from purchased fabric, leather, or from combinations of leather and fabric. Men's and boys' neckwear jobbers, who perform entrepreneurial functions involved in neckwear manufacture, including buying raw materials, designing and preparing samples, arranging for neckwear to be made from their materials, and marketing finished neckwear, are included.

The data published with NAICS code 315993 include the following SIC industry:

2323 Men's and boys' neckwear

### **315999 Other Apparel Accessories and Other Apparel Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing apparel and apparel accessories (except apparel knitting mills; cut and sew apparel contractors; cut and sew apparel; hats and caps; mittens and

gloves; and men's and boys' neckwear). Jobbers for these products, who perform entrepreneurial functions involved in other apparel and accessory manufacture, including buying raw materials, designing and preparing samples, arranging for other apparel and accessories to be made from their materials, and marketing finished other apparel and accessories, are included. Examples of products made by these establishments are apparel trimmings and findings, belts, women's scarves, suspenders, and waterproof outerwear.

The data published with NAICS code 315999 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

2387 Apparel belts

2389 Apparel and accessories, n.e.c. (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

5699 Miscellaneous apparel and accessory stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315999 include establishments primarily engaged in custom tailoring but do not include establishments primarily engaged in the manufacture of rubber bibs, aprons, and bathing caps.

### **316 Leather and Allied Product Manufacturing**

Establishments in the Leather and Allied Product Manufacturing subsector transform hides into leather by tanning or curing and fabricating the leather into products for final consumption. It also includes the manufacture of similar products from other materials, including products (except apparel) made from "leather substitutes," such as rubber, plastics, or textiles. Rubber footwear, textile luggage, and plastics purses or wallets are examples of "leather substitute" products included in this group. The products made from leather substitutes are included in this subsector because they are made in similar ways leather products are made (e.g., luggage). They are made in the same establishments, so it is not practical to separate them.

The inclusion of leather making in this subsector is partly because leather tanning is a relatively small industry that has few close neighbors as a production process, partly because leather is an input to some of the other products classified in this subsector and partly for historical reasons.

### **3161 Leather and Hide Tanning and Finishing**

This NAICS industry group includes establishments classified in NAICS Industry 31611, Leather and Hide Tanning and Finishing.

#### **31611 Leather and Hide Tanning and Finishing**

This industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

##### **316110 Leather and Hide Tanning and Finishing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

The data published with NAICS code 316110 include the following SIC industries:

3111 Leather tanning and finishing

3999 Manufacturing industries, n.e.c. (pt)

### **3162 Footwear Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31621, Footwear Manufacturing.

#### **31621 Footwear Manufacturing**

This industry comprises establishments primarily engaged in manufacturing footwear (except orthopedic extension footwear).

##### **316211 Rubber and Plastics Footwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rubber and plastics footwear with vulcanized rubber or plastics soles, molded or cemented to rubber, plastics, or fabric uppers, and rubber and plastics protective footwear.

The data published with NAICS code 316211 include the following SIC industry:

Rubber and plastics footwear

##### **316212 House Slipper Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing house slippers and slipper socks, regardless of material.

The data published with NAICS code 316212 include the following SIC industry:

3142 House slippers

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### **316213 Men's Footwear (Except Athletic) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's footwear designed primarily for dress, street, and work. This industry includes men's shoes with rubber or plastics soles and leather or vinyl uppers.

The data published with NAICS code 316213 include the following SIC industry:

3143 Men's footwear, except athletic

### **316214 Women's Footwear (Except Athletic) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's footwear designed for dress, street, and work. This industry includes women's shoes with rubber or plastics soles and leather or vinyl uppers.

The data published with NAICS code 316214 include the following SIC industry:

3144 Women's footwear, except athletic

### **316219 Other Footwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing other footwear (except rubber and plastics footwear; house slippers; men's footwear (except athletic); and women's footwear (except athletic)).

The data published with NAICS code 316219 include the following SIC industry:

3149 Footwear, except rubber, n.e.c.

### **3169 Other Leather and Allied Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31699, Other Leather and Allied Product Manufacturing.

### **31699 Other Leather and Allied Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing leather products (except footwear and apparel) from purchased leather or leather substitutes (e.g., fabric, plastics).

### **316991 Luggage Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing luggage of any material.

The data published with NAICS code 316991 include the following SIC industry:

3161 Luggage

### **316992 Women's Handbag and Purse Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's handbags and purses of any material (except precious metal).

The data published with NAICS code 316992 include the following SIC industry:

3171 Women's handbags and purses

### **316993 Personal Leather Goods (Except Women's Handbag and Purse) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing personal leather goods (i.e., small articles of any material (except metal) normally carried on or about the person or in a handbag). Examples of personal leather goods made by these establishments are billfolds, coin purses, key cases, toilet kits, and watchbands (except metal).

The data published with NAICS code 316993 include the following SIC industry:

3172 Personal leather goods, n.e.c.

### **316999 All Other Leather Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing leather goods (except footwear, luggage, handbags, purses, and personal leather goods).

The data published with NAICS code 316999 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3199 Leather goods, n.e.c.

### **321 Wood Product Manufacturing**

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers.

The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

## **3211 Sawmills and Wood Preservation**

This industry group comprises establishments whose primary production process begins with logs or bolts that are transformed into boards, dimension lumber, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips. Establishments that cut and treat round wood and/or treat wood products made in other establishments to prevent rotting by impregnation with creosote or other chemical compounds are also included in this industry group.

### **32111 Sawmills and Wood Preservation**

This industry comprises establishments primarily engaged in one or more of the following: (1) sawing dimension lumber, boards, beams, timber, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts; (2) sawing round wood poles, pilings, and posts and treating them with preservatives; and (3) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives to prevent decay and to protect against fire and insects. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

#### **321113 Sawmills**

This U.S. industry comprises establishments primarily engaged in sawing dimension lumber, boards, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

The data published with NAICS code 321113 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2439 Structural wood members, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321113 include establishments primarily engaged in the manufacture of lumber members made from logs and bolts, but do not include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **321114 Wood Preservation**

This U.S. industry comprises establishments primarily engaged in (1) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives,

such as chromated copper arsenate, to prevent decay and to protect against fire and insects and/or (2) sawing round wood poles, pilings, and posts and treating them with preservatives.

The data published with NAICS code 321114 include the following SIC industry:

2491 Wood preserving

## **3212 Veneer, Plywood, and Engineered Wood Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 32121, Veneer, Plywood, and Engineered Wood Product Manufacturing.

### **32121 Veneer, Plywood, and Engineered Wood Product Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing veneer and/or plywood; (2) manufacturing engineered wood members; and (3) manufacturing reconstituted wood products. This industry includes manufacturing plywood from veneer made in the same establishment or from veneer made in other establishments, and manufacturing plywood faced with nonwood materials, such as plastics or metal.

#### **321211 Hardwood Veneer and Plywood Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing hardwood veneer and/or hardwood plywood.

The data published with NAICS code 321211 include the following SIC industry:

2435 Hardwood veneer and plywood

#### **321212 Softwood Veneer and Plywood Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing softwood veneer and/or softwood plywood.

The data published with NAICS code 321212 include the following SIC industry:

2436 Softwood veneer and plywood

#### **321213 Engineered Wood Member (Except Truss) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated or laminated wood arches and/or other fabricated or laminated wood structural members.

The data published with NAICS code 321213 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

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### **321214 Truss Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing laminated or fabricated wood roof and floor trusses.

The data published with NAICS code 321214 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

### **321219 Reconstituted Wood Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing reconstituted wood sheets and boards.

The data published with NAICS code 321219 include the following SIC industry:

2493 Reconstituted wood products

### **3219 Other Wood Product Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, or engineered wood products).

#### **32191 Millwork**

This industry comprises establishments primarily engaged in manufacturing hardwood and softwood cut stock and dimension stock (i.e., shapes); wood windows and wood doors; and other millwork including wood flooring. Dimension stock or cut stock is defined as lumber and worked wood products cut or shaped to specialized sizes. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

#### **321911 Wood Window and Door Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing window and door units, sash, window and door frames, and doors from wood or wood clad with metal or plastics.

The data published with NAICS code 321911 include the following SIC industry:

2431 Millwork (pt)

#### **321912 Cut Stock, Resawing Lumber, and Planing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dimension lumber from purchased lumber; (2) manufacturing dimension stock (i.e., shapes) or cut stock; (3) resawing the output of sawmills; and (4) planing purchased lumber. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

The data published with NAICS code 321912 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2439 Structural wood members, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321912 include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts, lumber members made from purchased lumber, and semi-machined and fully-machined softwood dimension lumber, but do not include establishments primarily engaged in the manufacture of staves from purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **321918 Other Millwork (Including Flooring)**

This U.S. industry comprises establishments primarily engaged in manufacturing millwork (except wood windows, wood doors, and cut stock).

The data published with NAICS code 321918 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2431 Millwork (pt)

#### **32192 Wood Container and Pallet Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

#### **321920 Wood Container and Pallet Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

The data published with NAICS code 321920 include the following SIC industries:

2429 Special product sawmills, n.e.c. (pt)

2441 Nailed wood boxes & shoo

2448 Wood pallets and skids

2449 Wood containers, n.e.c.

2499 Wood products, n.e.c. (pt)

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321920 include establishments primarily engaged in the manufacture of cooperage headings and staves made of purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **32199 All Other Wood Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, engineered wood products, millwork, wood containers, or pallets).

#### **321991 Manufactured Home (Mobile Home) Manufacturing**

This U.S. industry comprises establishments primarily engaged in making manufactured homes (i.e., mobile homes) and nonresidential mobile buildings. Manufactured homes are designed to accept permanent water, sewer, and utility connections and although equipped with wheels, they are not intended for regular highway movement.

The data published with NAICS code 321991 include the following SIC industry:

2451 Mobile homes

#### **321992 Prefabricated Wood Building Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated wood buildings and wood sections and panels for prefabricated wood buildings.

The data published with NAICS code 321992 include the following SIC industry:

2452 Prefabricated wood buildings

#### **321999 All Other Miscellaneous Wood Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and preservation facilities; establishments manufacturing veneer, engineered wood products, millwork, wood containers, pallets, and wood container parts; and establishments making manufactured homes (i.e., mobile homes) and prefabricated buildings and components).

The data published with NAICS code 321999 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

3131 Footwear cut stock and findings (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321999 include establishments primarily engaged in the manufacture of wood cooling towers, but do not include establishments primarily engaged in the manufacture of finished metal moldings for mirrors and pictures, semi-machined and fully-machined softwood dimension, or cooperage headings. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **322 Paper Manufacturing**

Industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and includes coating and laminating activities.

The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacturing of pulp and paper and the second for the manufacturing of converted paper products. Paper making is treated as the core activity of the subsector. Therefore, any establishment that makes paper (including paperboard), either alone or in combination with pulp manufacturing or paper converting, is classified as a paper or paperboard mill. Establishments that make pulp without making paper are classified as pulp mills. Pulp mills, paper mills and paperboard mills comprise the first industry group.

Establishments that make products from purchased paper and other materials make up the second industry group, Converted Paper Product Manufacturing. This general activity is then subdivided based, for the most part, on process distinctions. Paperboard container manufacturing uses corrugating, cutting, and shaping machinery to form paperboard into containers. Paper bag and coated and treated paper manufacturing establishments cut and coat paper and foil. Stationery product manufacturing establishments make a variety of paper products used for writing, filing, and similar applications. Other converted paper product manufacturing includes, in particular, the conversion of sanitary paper stock into such things as tissue paper and disposable diapers.

An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating makes a composite material with improved properties of strength, impermeability, and so on. The laminated materials may be paper, metal foil, or plastics film. While paper is often one of the components, it is not always. Lamination of plastics film to plastics film is classified in the NAICS Subsector 326, Plastics and Rubber Products Manufacturing, because establishments that do this often first make the film.

The same situation holds with respect to bags. The manufacturing of bags from plastics only, whether or not laminated, is classified in Subsector 326, Plastics and Rubber Products Manufacturing, but all other bag manufacturing is classified in this subsector.

Excluded from this subsector are photosensitive papers. These papers are chemically treated and are classified in Industry 32599, All Other Chemical Product and Preparation Manufacturing.

### **3221 Pulp, Paper, and Paperboard Mills**

This industry group comprises establishments primarily engaged in manufacturing pulp, paper, or paperboard.

#### **32211 Pulp Mills**

This industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

##### **322110 Pulp Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

The data published with NAICS code 322110 include the following SIC industry:

2611 Pulp mills

##### **32212 Paper Mills**

This industry comprises establishments primarily engaged in manufacturing paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may convert the paper they make. The activity of making paper classifies an establishment into this industry regardless of the output.

##### **322121 Paper (Except Newsprint) Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

The data published with NAICS code 322121 include the following SIC industries:

2621 Paper mills (pt)

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322121 include paper mills which convert sanitary paper stock into sanitary paper products, but do not include paper mills which are primarily engaged in the manufacture of other converted paper products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **3221211 Paper (Except Newsprint) Mills – Integrated Producer**

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp in combination with pulp manufacture.

##### **3221212 Paper (Except Newsprint) Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp not in combination with pulp manufacture.

##### **322122 Newsprint Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

The data published with NAICS code 322122 include the following SIC industry:

2621 Paper mills (pt)

##### **3221221 Newsprint Mills – Integrated Producer**

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp in combination with pulp manufacture.

##### **3221222 Newsprint Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp not in combination with pulp manufacture.

##### **32213 Paperboard Mills**

This industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

### **322130 Paperboard Mills**

This U.S. industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

The data published with NAICS code 322130 include the following SIC industry:

2631 Paperboard mills

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322130 do not include paperboard mills primarily engaged in converting paperboard into paperboard products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3221301 Paperboard Mills – Integrated Producer**

Establishments primarily engaged in manufacturing paperboard from pulp in combination with pulp manufacture.

#### **3221302 Paperboard Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing paperboard from pulp not in combination with pulp manufacture or paperboard converting.

### **3222 Converted Paper Product Manufacturing**

This industry group comprises establishments primarily engaged in converting paper or paperboard without manufacturing paper or paperboard.

#### **32221 Paperboard Container Manufacturing**

This industry comprises establishments primarily engaged in converting paperboard into containers without manufacturing paperboard. These establishments use corrugating, cutting, and shaping machinery to form paperboard into containers. Products made by these establishments include boxes; corrugated sheets, pads, and pallets; paper dishes; and fiber drums and reels.

#### **322211 Corrugated and Solid Fiber Box Manufacturing**

This U.S. industry comprises establishments primarily engaged in laminating purchased paper or paperboard into corrugated or solid fiber boxes and related products, such as pads, partitions, pallets, and corrugated paper without manufacturing paperboard. These boxes are generally used for shipping.

The data published with NAICS code 322211 include the following SIC industry:

2653 Corrugated and solid fiber boxes

#### **322212 Folding Paperboard Box Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paperboard (except corrugated) into folding paperboard boxes without manufacturing paper and paperboard.

The data published with NAICS code 322212 include the following SIC industry:

2657 Folding paperboard boxes

#### **322213 Setup Paperboard Box Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paperboard into setup paperboard boxes (i.e., rigid-sided boxes not shipped flat) without manufacturing paperboard.

The data published with NAICS code 322213 include the following SIC industry:

2652 Setup paperboard boxes

#### **322214 Fiber Can, Tube, Drum, and Similar Products Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paperboard into fiber cans, tubes, drums, and similar products without manufacturing paperboard.

The data published with NAICS code 322214 include the following SIC industry:

2655 Fiber cans, drums, and similar products

#### **322215 Nonfolding Sanitary Food Container Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting sanitary foodboard into food containers (except folding).

The data published with NAICS code 322215 include the following SIC industry:

2656 Sanitary food containers

#### **32222 Paper Bag and Coated and Treated Paper Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) cutting and coating paper and paperboard; (2) cutting and laminating paper and paperboard and other flexible materials (except plastics film to plastics film); (3) manufacturing bags or multiwall bags or sacks of paper, metal foil, coated paper, or laminates or coated combinations of paper and foil with plastics film; (4) manufacturing laminated aluminum and other converted metal foils from purchased foils; and (5) surface coating paper or paperboard.

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### **322221 Coated and Laminated Packaging Paper and Plastics Film Manufacturing**

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with the manufacturing of packaging materials: (1) cutting and coating paper; and (2) cutting and laminating paper with other flexible materials (except plastics to plastics or foil to paper laminates). The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322221 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

### **322222 Coated and Laminated Paper Manufacturing**

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with making products designed for purposes other than packaging: (1) cutting and coating paper; (2) cutting and laminating paper and other flexible materials (except plastics film to plastics film); and (3) manufacturing converted aluminum and other metal foils for non-packaging uses from purchased foils. The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322222 include the following SIC industries:

2672 Paper - coated and laminated, n.e.c.

2679 Converted paper products, n.e.c. (pt)

### **322223 Plastics, Foil, and Coated Paper Bag Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing bags of coated paper, of metal foil, or of laminated or coated combinations of plastics, foil, and paper, whether or not printed.

The data published with NAICS code 322223 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

### **322224 Uncoated Paper and Multiwall Bag Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing uncoated paper bags or multiwall bags and sacks.

The data published with NAICS code 322224 include the following SIC industry:

2674 Bags - uncoated paper and multiwall

### **322225 Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses**

This U.S. industry comprises establishments primarily engaged in laminating aluminum and other metal foil into products with flexible packaging uses or gift wrap and other packaging wrap applications.

The data published with NAICS code 322225 include the following SIC industry:

3497 Metal foil and leaf (pt)

### **322226 Surface-Coated Paperboard Manufacturing**

This U.S. industry comprises establishments primarily engaged in laminating, lining, or surface coating purchased paperboard to make other paperboard products.

The data published with NAICS code 322226 include the following SIC industry:

2675 Die-cut paper and board (pt)

### **32223 Stationery Product Manufacturing**

This industry comprises establishments primarily engaged in converting paper or paperboard into products used for writing, filing, art work, and similar applications.

### **322231 Die-Cut Paper and Paperboard Office Supplies Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paper rollstock or paperboard into die-cut paper or paperboard office supplies. For the purpose of this industry, office supplies are defined as office products, such as filing folders, index cards, rolls for adding machines, file separators and dividers, tabulating cards, and other paper and paperboard office supplies.

The data published with NAICS code 322231 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

### **322232 Envelope Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing envelopes for mailing or stationery of any material including combinations.

The data published with NAICS code 322232 include the following SIC industry:

2677 Envelopes

### **322233 Stationery, Tablet, and Related Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paper and paperboard into products used for writing and similar applications (e.g., loose-leaf fillers, notebooks, pads, stationery, tablets).

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The data published with NAICS code 322233 include the following SIC industry:

2678 Stationery products

### **32229 Other Converted Paper Product Manufacturing**

This industry comprises establishments primarily engaged in (1) converting paper and paperboard into products (except containers, bags, coated and treated paper and paperboard, and stationery products), or (2) converting pulp into pulp products, such as disposable diapers, or molded pulp egg cartons, food trays, and dishes. Processes used include laminating or lining purchased paper or paperboard.

#### **322291 Sanitary Paper Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting purchased sanitary paper stock or wadding into sanitary paper products, such as facial tissues and handkerchiefs, table napkins, toilet paper, towels, disposable diapers, sanitary napkins, and tampons.

The data published with NAICS code 322291 include the following SIC industries:

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

#### **322299 All Other Converted Paper Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting paper or paperboard into products (except containers, bags, coated and treated paper, stationery products, and sanitary paper products) or converting pulp into pulp products, such as egg cartons, food trays, and other food containers from molded pulp.

The data published with NAICS code 322299 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

### **323 Printing and Related Support Activities**

Industries in the Printing and Related Support Activities subsector print products, such as newspapers, books, periodicals, business forms, greeting cards, and other materials, and perform support activities, such as book-binding, platemaking services, and data imaging. The support activities included here are an integral part of the printing industry, and a product (a printing plate, a bound book, or a computer disk or file) that is an integral part of the printing industry is almost always provided by these operations.

Processes used in printing include a variety of methods used to transfer an image from a plate, screen, or computer file to some medium, such as paper, plastics, metal, textile articles, or wood. The most prominent of these methods is to transfer the image from a plate or screen to the medium (lithographic, gravure, screen, and flexographic printing). A rapidly growing new technology uses a computer file to directly “drive” the printing mechanism to create the image and new electrostatic and other types of equipment (digital or nonimpact printing).

In contrast to many other classification systems that locate publishing of printed materials in manufacturing, NAICS classifies the publishing of printed products in Subsector 511, Publishing Industries. Though printing and publishing are often carried out by the same enterprise (a newspaper, for example), it is less and less the case that these distinct activities are carried out in the same establishment. When publishing and printing are done in the same establishment, the establishment is classified in Sector 51, Information, in the appropriate NAICS industry even if the receipts for printing exceed those for publishing.

This subsector includes printing on clothing because the production process for that activity is printing, not clothing manufacturing. For instance, the printing of T-shirts is included in this subsector. In contrast, printing on fabric (or grey goods) is not included. This activity is part of the process of finishing the fabric and is included in the NAICS Textile Mills subsector in Industry 31331, Textile and Fabric Finishing Mills.

#### **3231 Printing and Related Support Activities**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32311, Printing; and 32312, Support Activities for Printing.

##### **32311 Printing**

This industry comprises establishments primarily engaged in printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods). The printing processes employed include, but are not limited to, lithographic, gravure, screen, flexographic, digital, and letterpress. Establishments in this industry do not manufacture the stock that they print but may perform postprinting activities, such as bending, cutting, or laminating the materials they print, and mailing.

##### **323110 Commercial Lithographic Printing**

This U.S. industry comprises establishments primarily engaged in lithographic (i.e., offset) printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in lithographic printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

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The data published with NAICS code 323110 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323111 Commercial Gravure Printing**

This U.S. industry comprises establishments primarily engaged in gravure printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in gravure printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

The data published with NAICS code 323111 include the following SIC industries:

- 2754 Commercial printing, gravure
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323112 Commercial Flexographic Printing**

This U.S. industry comprises establishments primarily engaged in flexographic printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in flexographic printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

The data published with NAICS code 323112 include the following SIC industries:

- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323113 Commercial Screen Printing**

This U.S. industry comprises establishments primarily engaged in screen printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in screen printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis. Establishments primarily engaged in printing on apparel and textile products, such as T-shirts, caps, jackets, towels, and napkins, are included in this industry.

The data published with NAICS code 323113 include the following SIC industries:

- 2396 Automotive and apparel trimmings (pt)
- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323114 Quick Printing**

This U.S. industry comprises establishments primarily engaged in traditional printing activities, such as short-run offset printing or prepress services, in combination with providing document photocopying service. Prepress services include receiving documents in electronic format and directly duplicating from the electronic file and formatting, colorizing, and otherwise modifying the original document to improve presentation. These establishments, known as quick printers, generally provide short-run printing and copying with fast turnaround times.

The data published with NAICS code 323114 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2759 Commercial printing, n.e.c. (pt)

### **323115 Digital Printing**

This U.S. industry comprises establishments primarily engaged in printing graphical materials using digital printing equipment. Establishments known as digital printers typically provide sophisticated prepress services including using scanners to input images and computers to manipulate and format the graphic images prior to printing.

The data published with NAICS code 323115 include the following SIC industry:

- 2759 Commercial printing, n.e.c. (pt)

### **323116 Manifold Business Form Printing**

This U.S. industry comprises establishments primarily engaged in printing special forms, including checkbooks, for use in the operation of a business. The forms may be in single and multiple sets, including carbonized, interleaved with carbon, or otherwise processed for multiple reproduction.

The data published with NAICS code 323116 include the following SIC industries:

- 2761 Manifold business forms
- 2782 Blankbooks and looseleaf binders (pt)

### **323117 Book Printing**

This U.S. industry comprises establishments primarily engaged in printing or printing and binding books and pamphlets without publishing.

The data published with NAICS code 323117 include the following SIC industry:

- 2732 Book printing

### **323118 Blankbook, Looseleaf Binders, and Devices Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing blankbooks, looseleaf devices, and binders. Establishments in this industry may print or print and bind.

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The data published with NAICS code 323118 include the following SIC industry:

2782 Blankbooks and looseleaf binders (pt)

### **323119 Other Commercial Printing**

This U.S. industry comprises establishments primarily engaged in commercial printing (except lithographic, gravure, screen, or flexographic printing) without publishing (except books, grey goods, and manifold business forms). Printing processes included in this industry are letterpress printing and engraving printing. This industry includes establishments engaged in commercial printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

The data published with NAICS code 323119 include the following SIC industries:

2759 Commercial printing, n.e.c. (pt)

2771 Greeting cards (pt)

3999 Manufacturing industries, n.e.c. (pt)

### **32312 Support Activities for Printing**

This industry comprises establishments primarily engaged in performing prepress (e.g., platemaking, typesetting) and postpress services (e.g., book binding) in support of printing activities.

### **323121 Tradebinding and Related Work**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tradebinding; (2) sample mounting; and (3) postpress services (e.g., book or paper bronzing, die-cutting, edging, embossing, folding, gilding, gluing, indexing).

The data published with NAICS code 323121 include the following SIC industry:

2789 Bookbinding and related work

### **323122 Prepress Services**

This U.S. industry comprises (1) establishments primarily engaged in prepress services, such as imagesetting or typesetting, for printers and (2) establishments primarily engaged in preparing film or plates for printing purposes.

The data published with NAICS code 323122 include the following SIC industries:

2791 Typesetting

2796 Platemaking services

## **324 Petroleum and Coal Products Manufacturing**

The Petroleum and Coal Products Manufacturing subsector is based on the transformation of crude petroleum and coal into usable products. The dominant process is

petroleum refining that involves the separation of crude petroleum into component products through such techniques as cracking and distillation.

In addition, this subsector includes establishments that primarily further process refined petroleum and coal products and produce products, such as asphalt coatings and petroleum lubricating oils. However, establishments that manufacture petrochemicals from refined petroleum are classified in Industry 32511, Petrochemical Manufacturing.

### **3241 Petroleum and Coal Products Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32411, Petroleum Refineries; 32412, Asphalt Paving, Roofing, and Saturated Materials Manufacturing; and 32419, Other Petroleum and Coal Products Manufacturing.

#### **32411 Petroleum Refineries**

This industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

##### **324110 Petroleum Refineries**

This U.S. industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

The data published with NAICS code 324110 include the following SIC industry:

2911 Petroleum refining

#### **32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

##### **32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

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### **324121 Asphalt Paving Mixture and Block Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing asphalt and tar paving mixtures and blocks from purchased asphaltic materials.

The data published with NAICS code 324121 include the following SIC industry:

2951 Asphalt paving mixtures and blocks

### **324122 Asphalt Shingle and Coating Materials Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials and (2) manufacturing asphalt and tar and roofing cements and coatings from purchased asphaltic materials.

The data published with NAICS code 324122 include the following SIC industry:

2952 Asphalt felts and coatings

### **32419 Other Petroleum and Coal Products Manufacturing**

This industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing, and saturated materials) from refined petroleum or coal products made in coke ovens not integrated with a steel mill.

#### **324191 Petroleum Lubricating Oil and Grease Manufacturing**

This U.S. industry comprises establishments primarily engaged in blending or compounding refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

The data published with NAICS code 324191 include the following SIC industry:

2992 Lubricating oils and greases

#### **324199 All Other Petroleum and Coal Products Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing, and saturated materials and lubricating oils and greases) from refined petroleum and coal products made in coke ovens not integrated with a steel mill.

The data published with NAICS code 324199 include the following SIC industries:

2999 Petroleum and coal products, n.e.c.

3312 Blast furnaces and steel mills (pt)

### **325 Chemical Manufacturing**

The Chemical Manufacturing subsector is based on the transformation of organic and inorganic raw materials by a chemical process and the formulation of products. This subsector distinguishes the production of basic chemicals that comprise the first industry group from the production of intermediate and end products produced by further processing of basic chemicals that make up the remaining industry groups.

This subsector does not include all industries transforming raw materials by a chemical process. It is common for some chemical processing to occur during mining operations. These beneficiating operations, such as copper concentrating, are classified in Sector 21, Mining. Furthermore, the refining of crude petroleum is included in Subsector 324, Petroleum and Coal Products Manufacturing. In addition, the manufacturing of aluminum oxide is included in Subsector 331, Primary Metal Manufacturing; and beverage distilleries are classified in Subsector 312, Beverage and Tobacco Product Manufacturing. As in the case of these two activities, the grouping of industries into subsectors may take into account the association of the activities performed with other activities in the subsector.

#### **3251 Basic Chemical Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing chemicals using basic processes, such as thermal cracking and distillation. Chemicals manufactured in this industry group are usually separate chemical elements or separate chemically-defined compounds.

##### **32511 Petrochemical Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or (2) manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

###### **325110 Petrochemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or (2) manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

The data published with NAICS code 325110 include the following SIC industries:

2865 Cyclic crudes and intermediates (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

### **32512 Industrial Gas Manufacturing**

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

### **325120 Industrial Gas Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

The data published with NAICS code 325120 include the following SIC industries:

2813 Industrial gases

2869 Industrial organic chemicals, n.e.c. (pt)

### **32513 Synthetic Dye and Pigment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing synthetic organic and inorganic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

### **325131 Inorganic Dye and Pigment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing inorganic dyes and pigments.

The data published with NAICS code 325131 include the following SIC industries:

2816 Inorganic pigments (pt)

2819 Industrial inorganic chemicals, n.e.c. (pt)

### **325132 Synthetic Organic Dye and Pigment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing synthetic organic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

The data published with NAICS code 325132 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

### **32518 Other Basic Inorganic Chemical Manufacturing**

This industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases and synthetic dyes and pigments).

### **325181 Alkalies and Chlorine Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing chlorine, sodium hydroxide (i.e., caustic soda), and other alkalies often using an electrolysis process.

The data published with NAICS code 325181 include the following SIC industry:

2812 Alkalies and chlorine

### **325182 Carbon Black Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon black, bone black, and lamp black.

The data published with NAICS code 325182 include the following SIC industries:

2816 Inorganic pigments (pt)

2895 Carbon black

### **325188 All Other Basic Inorganic Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases, inorganic dyes and pigments, alkalies and chlorine, and carbon black).

The data published with NAICS code 325188 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

### **32519 Other Basic Organic Chemical Manufacturing**

This industry comprises establishments primarily engaged in manufacturing basic organic chemicals (except petrochemicals, industrial gases, and synthetic dyes and pigments).

### **325191 Gum and Wood Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) distilling wood or gum into products, such as tall oil and wood distillates, and (2) manufacturing wood or gum chemicals, such as naval stores, natural tanning materials, charcoal briquettes, and charcoal (except activated).

The data published with NAICS code 325191 include the following SIC industry:

2861 Gum and wood chemicals

### **325192 Cyclic Crude and Intermediate Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) distilling coal tars and/or (2) manufacturing cyclic crudes or cyclic intermediates (i.e., hydrocarbons, except aromatic petrochemicals) from refined petroleum or natural gas.

The data published with NAICS code 325192 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

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### **325193 Ethyl Alcohol Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonpotable ethyl alcohol.

The data published with NAICS code 325193 include the following SIC industry:

2869 Industrial organic chemicals, n.e.c. (pt)

### **325199 All Other Basic Organic Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing basic organic chemical products (except aromatic petrochemicals, industrial gases, synthetic organic dyes and pigments, gum and wood chemicals, cyclic crudes and intermediates, and ethyl alcohol).

The data published with NAICS code 325199 include the following SIC industries:

2869 Industrial organic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

### **3252 Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing**

#### **32521 Resin and Synthetic Rubber Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing synthetic resins, plastics materials, and nonvulcanizable elastomers and mixing and blending resins on a custom basis; (2) manufacturing noncustomized synthetic resins; and (3) manufacturing synthetic rubber.

#### **325211 Plastics Material and Resin Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing resins, plastics materials, and nonvulcanizable thermoplastic elastomers and mixing and blending resins on a custom basis and/or (2) manufacturing noncustomized synthetic resins.

The data published with NAICS code 325211 include the following SIC industry:

2821 Plastics materials and resins

#### **325212 Synthetic Rubber Manufacturing**

This U.S. industry consists of establishments primarily engaged in manufacturing synthetic rubber.

The data published with NAICS code 325212 include the following SIC industry:

2822 Synthetic rubber

### **32522 Artificial and Synthetic Fibers and Filaments Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) and noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic and noncellulosic fibers and filaments.

#### **325221 Cellulosic Organic Fiber Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic fibers and filaments.

The data published with NAICS code 325221 include the following SIC industry:

2823 Cellulosic manmade fibers

#### **325222 Noncellulosic Organic Fiber Manufacturing**

This U.S. industry consists of establishments primarily engaged in (1) manufacturing noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing noncellulosic fibers and filaments.

The data published with NAICS code 325222 include the following SIC industry:

2824 Organic fibers, noncellulosic

### **3253 Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32531, Fertilizer Manufacturing; and 32532, Pesticide and Other Agricultural Chemical Manufacturing.

#### **32531 Fertilizer Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous or phosphatic fertilizer materials; (2) manufacturing fertilizers from sewage or animal waste; (3) manufacturing nitrogenous or phosphatic materials and mixing with other ingredients into fertilizers; and (4) mixing ingredients made elsewhere into fertilizers.

#### **325311 Nitrogenous Fertilizer Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous fertilizer materials and mixing ingredients

into fertilizers; (2) manufacturing fertilizers from sewage or animal waste; and (3) manufacturing nitrogenous materials and mixing them into fertilizers.

The data published with NAICS code 325311 include the following SIC industry:

2873 Nitrogenous fertilizers

### **325312 Phosphatic Fertilizer Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing phosphatic fertilizer materials or (2) manufacturing phosphatic materials and mixing them into fertilizers.

The data published with NAICS code 325312 include the following SIC industry:

2874 Phosphatic fertilizers

### **325314 Fertilizer (Mixing Only) Manufacturing**

This U.S. industry comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

The data published with NAICS code 325314 include the following SIC industry:

2875 Fertilizers, mixing only

### **32532 Pesticide and Other Agricultural Chemical Manufacturing**

This industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

### **325320 Pesticide and Other Agricultural Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

The data published with NAICS code 325320 include the following SIC industry:

2879 Agricultural chemicals, n.e.c.

### **3254 Pharmaceutical and Medicine Manufacturing**

This NAICS industry group includes establishments classified in Industry 32541, Pharmaceutical and Medicine Manufacturing.

### **32541 Pharmaceutical and Medicine Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical

products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

### **325411 Medicinal and Botanical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing uncompounded medicinal chemicals and their derivatives (i.e., generally for use by pharmaceutical preparation manufacturers) and/or (2) grading, grinding, and milling uncompounded botanicals.

The data published with NAICS code 325411 include the following SIC industry:

2833 Medicinals and botanicals

### **325412 Pharmaceutical Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

The data published with NAICS code 325412 include the following SIC industries:

2834 Pharmaceutical preparations

2835 Diagnostic substances (pt)

### **325413 In-Vitro Diagnostic Substance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing in-vitro (i.e., not taken internally) diagnostic substances, such as chemical, biological, or radioactive substances. The substances are used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices.

The data published with NAICS code 325413 include the following SIC industry:

2835 Diagnostic substances (pt)

### **325414 Biological Product (Except Diagnostic) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vaccines, toxoids, blood fractions, and culture media of plant or animal origin (except diagnostic).

The data published with NAICS code 325414 include the following SIC industry:

2836 Biological products, except diagnostic

### **3255 Paint, Coating, and Adhesive Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32551, Paint and Coating Manufacturing; and 32552, Adhesive Manufacturing.

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### **32551 Paint and Coating Manufacturing**

This industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

#### **325510 Paint and Coating Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

The data published with NAICS code 325510 include the following SIC industries:

2851 Paints and allied products

2899 Chemical preparations, n.e.c. (pt)

### **32552 Adhesive Manufacturing**

This industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

#### **325520 Adhesive Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

The data published with NAICS code 325520 include the following SIC industry:

2891 Adhesives and sealants

### **3256 Soap, Cleaning Compound, and Toilet Preparation Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32561, Soap and Cleaning Compound Manufacturing; and 32562, Toilet Preparation Manufacturing.

#### **32561 Soap and Cleaning Compound Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and packaging soap and other cleaning compounds, surface active agents, and textile and leather finishing agents used to reduce tension or speed the drying process.

### **325611 Soap and Other Detergent Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging soaps and other detergents, such as laundry detergents; dishwashing detergents; toothpaste gels and tooth powders; and natural glycerin.

The data published with NAICS code 325611 include the following SIC industries:

2841 Soap and other detergents

2844 Toilet preparations (pt)

#### **325612 Polish and Other Sanitation Good Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging polishes and specialty cleaning preparations.

The data published with NAICS code 325612 include the following SIC industry:

2842 Polishes and sanitation goods

#### **325613 Surface Active Agent Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing bulk surface active agents for use as wetting agents, emulsifiers, and penetrants, and/or (2) manufacturing textiles and leather finishing agents used to reduce tension or speed the drying process.

The data published with NAICS code 325613 include the following SIC industry:

2843 Surface active agents

#### **32562 Toilet Preparation Manufacturing**

This industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

#### **325620 Toilet Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

The data published with NAICS code 325620 include the following SIC industry:

2844 Toilet preparations (pt)

#### **3259 Other Chemical Product Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals; resins, synthetic rubber, cellulosic and

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noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soaps and cleaning compounds; and toilet preparations).

### **32591 Printing Ink Manufacturing**

This industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

### **325910 Printing Ink Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

The data published with NAICS code 325910 include the following SIC industry:

2893 Printing ink

### **32592 Explosives Manufacturing**

This industry comprises establishments primarily engaged in manufacturing explosives.

### **325920 Explosives Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing explosives.

The data published with NAICS code 325920 include the following SIC industry:

2892 Explosives

### **32599 All Other Chemical Product and Preparation Manufacturing**

This industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, and synthetic rubber; cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; and soaps, cleaning compounds, and toilet preparations; printing inks; and explosives).

### **325991 Custom Compounding of Purchased Resins**

This U.S. industry comprises establishments primarily engaged in (1) custom mixing and blending plastics resins made elsewhere or (2) reformulating plastics resins from recycled plastics products.

The data published with NAICS code 325991 include the following SIC industries:

3087 Custom compound purchased resins

### **325992 Photographic Film, Paper, Plate, and Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sensitized film, sensitized paper, sensitized cloth, sensitized plates, toners (i.e., for photocopiers, laser printers, and similar electrostatic printing devices), toner cartridges, and photographic chemicals.

The data published with NAICS code 325992 include the following SIC industry:

3861 Photographic equipment and supplies (pt)

### **325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, synthetic rubber; cellulosic and noncellulosic fiber and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soap, cleaning compounds, and toilet preparations; printing inks; explosives; custom compounding of purchased resins; and photographic films, papers, plates, and chemicals).

The data published with NAICS code 325998 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 325998 do not include establishments primarily engaged in aerosol packaging. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **326 Plastics and Rubber Products Manufacturing**

Industries in the Plastics and Rubber Products Manufacturing subsector make goods by processing plastics materials and raw rubber. The core technology employed by establishments in this subsector is that of plastics or rubber product production. Plastics and rubber are combined in the same subsector because plastics are increasingly being used as a substitute for rubber; however, the subsector is generally restricted to the production of products made of just one material, either solely plastics or rubber.

Many manufacturing activities use plastics or rubber, for example the manufacture of footwear, or furniture. Typically, the production process of these products

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involves more than one material. In these cases, technologies that allow disparate materials to be formed and combined are of central importance in describing the manufacturing activity. In NAICS, such activities (the footwear and furniture manufacturing) are not classified in the Plastics and Rubber Products Manufacturing subsector because the core technologies for these activities are diverse and involve multiple materials.

Within the Plastics and Rubber Products Manufacturing subsector, a distinction is made between plastics and rubber products at the industry group level, although it is not a rigid distinction, as can be seen from the definition of Industry 32622, Rubber and Plastics Hose and Belting Manufacturing. As materials technology progresses, plastics are increasingly being used as a substitute for rubber; and eventually, the distinction may disappear as a basis for establishment classification.

In keeping with the core technology focus of plastics, lamination of plastics film to plastics film as well as the production of bags from plastics only is classified in this subsector. Lamination and bag production involving plastics and materials other than plastics are classified in the NAICS Subsector 322, Paper Manufacturing.

### **3261 Plastics Product Manufacturing**

This industry group comprises establishments primarily engaged in processing new or spent (i.e., recycled) plastics resins into intermediate or final products, using such processes as compression molding; extrusion molding; injection molding; blow molding; and casting. Within most of these industries, the production process is such that a wide variety of products can be made.

#### **32611 Unsupported Plastics Film, Sheet, and Bag Manufacturing**

This industry comprises establishments primarily engaged in (1) converting plastics resins into unsupported plastics film and sheet and/or (2) forming, coating, or laminating plastics film and sheet into plastics bags.

##### **326111 Unsupported Plastics Bag Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) converting plastics resins into plastics bags or (2) forming, coating, or laminating plastics film and sheet into single wall or multiwall plastics bags. Establishments in this industry may print on the bags they manufacture.

The data published with NAICS code 326111 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

##### **326112 Unsupported Plastics Packaging Film and Sheet Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics packaging (flexible) film and packaging sheet.

The data published with NAICS code 326112 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

##### **326113 Unsupported Plastics Film and Sheet (Except Packaging) Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics film and unlaminated sheet (except packaging).

The data published with NAICS code 326113 include the following SIC industry:

3081 Unsupported plastics film and sheet

##### **32612 Plastics Pipe, Pipe Fitting, and Unsupported Profile Shape Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics pipes and pipe fittings, and plastics profile shapes such as rod, tube, and sausage casings.

##### **326121 Unsupported Plastics Profile Shapes Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into nonrigid plastics profile shapes (except film, sheet, and bags), such as rod, tube, and sausage casings.

The data published with NAICS code 326121 include the following SIC industry:

3082 Unsupported plastics profile shapes

##### **326122 Plastics Pipe and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into rigid plastics pipes and pipe fittings.

The data published with NAICS code 326122 include the following SIC industries:

3084 Plastics pipe

3089 Plastics products, n.e.c. (pt)

##### **32613 Laminated Plastics Plate, Sheet, and Shape Manufacturing**

This industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

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### **326130 Laminated Plastics Plate, Sheet, and Shape Manufacturing**

This U.S. industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

The data published with NAICS code 326130 include the following SIC industry:

3083 Laminated plastics plate and sheet

### **32614 Polystyrene Foam Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

### **326140 Polystyrene Foam Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

The data published with NAICS code 326140 include the following SIC industry:

3086 Plastics foam products (pt)

### **32615 Urethane and Other Foam Product (Except Polystyrene) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

### **326150 Urethane and Other Foam Product (Except Polystyrene) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

The data published with NAICS code 326150 include the following SIC industry:

3086 Plastics foam products (pt)

### **32616 Plastics Bottle Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics bottles.

### **326160 Plastics Bottle Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics bottles.

The data published with NAICS code 326160 include the following SIC industry:

3085 Plastics bottles

### **32619 Other Plastics Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing resilient floor covering and other plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, and bottles).

### **326191 Plastics Plumbing Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics or fiberglass plumbing fixtures. Examples of products made by these establishments are plastics or fiberglass bathtubs, hot tubs, portable toilets, and shower stalls.

The data published with NAICS code 326191 include the following SIC industry:

3088 Plastics plumbing fixtures

### **326192 Resilient Floor Covering Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing resilient floor coverings for permanent installation.

The data published with NAICS code 326192 include the following SIC industries:

3069 Fabricated rubber products, n.e.c. (pt)

3996 Hard surface floor coverings

### **326199 All Other Plastics Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, bottles, plumbing fixtures, and resilient floor coverings).

The data published with NAICS code 326199 include the following SIC industries:

3089 Plastics products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326199 include establishments primarily engaged in the manufacture of plastic furniture parts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3262 Rubber Product Manufacturing**

This industry group comprises establishments primarily engaged in processing natural and synthetic or reclaimed rubber materials into intermediate or final products using processes such as vulcanizing, cementing, molding, extruding, and lathe-cutting.

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### **32621 Tire Manufacturing**

This industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber and retreading or rebuilding tires.

#### **326211 Tire Manufacturing (Except Retreading)**

This U.S. industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

The data published with NAICS code 326211 include the following SIC industry:

3011 Tires and inner tubes

#### **326212 Tire Retreading**

This U.S. industry comprises establishments primarily engaged in retreading, or rebuilding tires.

The data published with NAICS code 326212 include the following SIC industry:

7534 Tire retreading and repair shops (pt)

### **32622 Rubber and Plastics Hoses and Belting Manufacturing**

This industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

#### **326220 Rubber and Plastics Hoses and Belting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

The data published with NAICS code 326220 include the following SIC industry:

3052 Rubber and plastics hose and belting

### **32629 Other Rubber Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing rubber products (except tires, hoses, and belting) from natural and synthetic rubber.

#### **326291 Rubber Product Manufacturing for Mechanical Use**

This U.S. industry comprises establishments primarily engaged in molding, extruding, or lathe-cutting rubber to manufacture rubber goods (except tubing) for mechanical applications. Products of this industry are generally parts for motor vehicles, machinery, and equipment.

The data published with NAICS code 326291 include the following SIC industry:

3061 Mechanical rubber goods

### **326299 All Other Rubber Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rubber products (except tires; hoses and belting; and molded, extruded, and lathe-cut rubber goods for mechanical applications) from natural and synthetic rubber.

The data published with NAICS code 326299 include the following SIC industry:

3069 Fabricated rubber products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326299 include establishments primarily engaged in the manufacture of rubber products including gloves, toys, pants, raincoats, bibs, aprons, bathing caps, life jackets, and wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **327 Nonmetallic Mineral Product Manufacturing**

The Nonmetallic Mineral Product Manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption. Processes used include grinding, mixing, cutting, shaping, and honing. Heat often is used in the process and chemicals are frequently mixed to change the composition, purity, and chemical properties for the intended product. For example, glass is produced by heating silica sand to the melting point (sometimes combined with cullet or recycled glass) and then drawn, floated, or blow molded to the desired shape or thickness. Refractory materials are heated and then formed into bricks or other shapes for use in industrial applications.

The Nonmetallic Mineral Product Manufacturing subsector includes establishments that manufacture products, such as bricks, refractories, ceramic products, and glass and glass products, such as plate glass and containers. Also included are cement and concrete products, lime, gypsum and other nonmetallic mineral products including abrasive products, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. The products are used in a wide range of activities from construction and heavy and light manufacturing to articles for personal use.

Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals and further

process the nonmetallic minerals into a more finished manufactured product are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more-finished manufactured product will be classified in the Manufacturing Sector.

Excluded from the Nonmetallic Mineral Product Manufacturing subsector are establishments that primarily benefit mined nonmetallic minerals. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. Beneficiation establishments are included in Sector 21, Mining.

### **3271 Clay Product and Refractory Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32711, Pottery, Ceramics, and Plumbing Fixture Manufacturing; and 32712, Clay Building Material and Refractories Manufacturing.

#### **32711 Pottery, Ceramics, and Plumbing Fixture Manufacturing**

This industry comprises establishments primarily engaged in shaping, molding, glazing, and firing pottery, ceramics, and plumbing fixtures made entirely or partly of clay or other ceramic materials.

#### **327111 Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vitreous china plumbing fixtures and china and earthenware bathroom accessories, such as faucet handles, towel bars, and soap dishes.

The data published with NAICS code 327111 include the following SIC industry:

3261 Vitreous plumbing fixtures

#### **327112 Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing table and kitchen articles, art and ornamental items, and similar vitreous china, fine earthenware, stoneware, coarse earthenware, and pottery products.

The data published with NAICS code 327112 include the following SIC industries:

3262 Vitreous china table and kitchen articles

3263 Fine earthenware table and kitchen articles

3269 Pottery products, n.e.c.

3299 Nonmetallic mineral products, n.e.c. (pt)

### **327113 Porcelain Electrical Supply Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing porcelain electrical insulators, molded porcelain parts for electrical devices, ferrite or ceramic magnets, and electronic and electrical supplies from nonmetallic minerals, such as clay and ceramic materials.

The data published with NAICS code 327113 include the following SIC industry:

3264 Porcelain electrical supplies

### **32712 Clay Building Material and Refractories Manufacturing**

This industry comprises establishments primarily engaged in shaping, molding, baking, burning, or hardening clay refractories, nonclay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

#### **327121 Brick and Structural Clay Tile Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing brick and structural clay tiles.

The data published with NAICS code 327121 include the following SIC industry:

3251 Brick and structural clay tile

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327121 include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **327122 Ceramic Wall and Floor Tile Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ceramic wall and floor tiles.

The data published with NAICS code 327122 include the following SIC industry:

3253 Ceramic wall and floor tile

#### **327123 Other Structural Clay Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing clay sewer pipe, drain tile, flue lining tile, architectural terra-cotta, and other structural clay products.

The data published with NAICS code 327123 include the following SIC industry:

3259 Structural clay products, n.e.c.

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### **327124 Clay Refractory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing clay refractory, mortar, brick, block, tile, and fabricated clay refractories, such as melting pots. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327124 include the following SIC industry:

3255 Clay refractories

### **327125 Nonclay Refractory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonclay refractory, mortar, brick, block, tile, and fabricated nonclay refractories such as graphite, magnesite, silica, or alumina crucibles. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327125 include the following SIC industry:

3297 Nonclay refractories

### **3272 Glass and Glass Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 32721, Glass and Glass Product Manufacturing.

#### **32721 Glass and Glass Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing glass and/or glass products. Establishments in this industry may manufacture glass and/or glass products by melting silica sand or cullet, or purchasing glass.

#### **327211 Flat Glass Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing flat glass by melting silica sand or cullet or (2) manufacturing both flat glass and laminated glass by melting silica sand or cullet.

The data published with NAICS code 327211 include the following SIC industry:

3211 Flat glass

#### **327212 Other Pressed and Blown Glass and Glassware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing glass by melting silica sand or cullet and making pressed, blown, or shaped glass or glassware (except glass packaging containers).

The data published with NAICS code 327212 include the following SIC industry:

3229 Pressed and blown glass, n.e.c.

### **327213 Glass Container Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing glass packaging containers.

The data published with NAICS code 327213 include the following SIC industry:

3221 Glass containers

### **327215 Glass Product Manufacturing Made of Purchased Glass**

This U.S. industry comprises establishments primarily engaged in remelting, pressing, blowing, or shaping purchased glass.

The data published with NAICS code 327215 include the following SIC industry:

3231 Products of purchased glass

### **3273 Cement and Concrete Product Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32731, Cement Manufacturing; 32732, Ready-Mix Concrete Manufacturing; 32733, Concrete Pipe, Brick, and Block Manufacturing; and 32739, Other Concrete Product Manufacturing.

#### **32731 Cement Manufacturing**

This industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

#### **327310 Cement Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

The data published with NAICS code 327310 include the following SIC industry:

3241 Cement, hydraulic

#### **32732 Ready-Mix Concrete Manufacturing**

This industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

### **327320 Ready-Mix Concrete Manufacturing**

This U.S. industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

The data published with NAICS code 327320 include the following SIC industry:

3273 Ready-mixed concrete

### **32733 Concrete Pipe, Brick, and Block Manufacturing**

This industry comprises establishments primarily engaged in manufacturing concrete pipe, brick, and block

#### **327331 Concrete Block and Brick Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete block and brick.

The data published with NAICS code 327331 include the following SIC industry:

3271 Concrete brick and block

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327331 do not include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **327332 Concrete Pipe Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete pipe.

The data published with NAICS code 327332 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

#### **32739 Other Concrete Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

#### **327390 Other Concrete Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

The data published with NAICS code 327390 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

### **3274 Lime and Gypsum Product Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32741, Lime Manufacturing; and 32742, Gypsum Product Manufacturing.

#### **32741 Lime Manufacturing**

This industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

#### **327410 Lime Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

The data published with NAICS code 327410 include the following SIC industry:

3274 Lime

#### **32742 Gypsum Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing gypsum products such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

#### **327420 Gypsum Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gypsum products, such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

The data published with NAICS code 327420 include the following SIC industries:

3275 Gypsum products

3299 Nonmetallic mineral products, n.e.c. (pt)

#### **3279 Other Nonmetallic Mineral Product Manufacturing**

The Other Nonmetallic Mineral Product Manufacturing industry group comprises establishments manufacturing nonmetallic mineral products (except clay products, refractory products, glass products, cement and concrete products, lime, and gypsum products).

### **32791 Abrasive Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products

#### **327910 Abrasive Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products.

The data published with NAICS code 327910 include the following SIC industry:

3291 Abrasive products (pt)

### **32799 All Other Nonmetallic Mineral Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; and abrasive products).

#### **327991 Cut Stone and Stone Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in cutting, shaping, and finishing granite, marble, limestone, slate, and other stone for building and miscellaneous uses. Stone product manufacturing establishments may mine, quarry, or purchase stone.

The data published with NAICS code 327991 include the following SIC industry:

3281 Cut stone and stone products

#### **327992 Ground or Treated Mineral and Earth Manufacturing**

This U.S. industry comprises establishments primarily engaged in calcining, dead burning, or otherwise processing beyond beneficiation, clays, ceramic and refractory minerals, barite, and miscellaneous nonmetallic minerals.

The data published with NAICS code 327992 include the following SIC industry:

3295 Minerals, ground or treated

#### **327993 Mineral Wool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing mineral wool and mineral wool (i.e., fiberglass) insulation products made of such siliceous materials as rock, slag, and glass or combinations thereof.

The data published with NAICS code 327993 include the following SIC industry:

3296 Mineral wool

### **327999 All Other Miscellaneous Nonmetallic Mineral Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; abrasive products; cut stone and stone products; ground and treated minerals and earth; and mineral wool).

The data published with NAICS code 327999 include the following SIC industries:

3272 Concrete products, n.e.c. (pt)

3292 Asbestos products (pt)

3299 Nonmetallic mineral products, n.e.c. (pt)

### **331 Primary Metal Manufacturing**

Industries in the Primary Metal Manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques. Establishments in this subsector also manufacture metal alloys and superalloys by introducing other chemical elements to pure metals. The output of smelting and refining, usually in ingot form, is used in rolling, drawing, and extruding operations to make sheet, strip, bar, rod, or wire, and in molten form to make castings and other basic metal products.

Primary manufacturing of ferrous and nonferrous metals begins with ore or concentrate as the primary input. Establishments manufacturing primary metals from ore and/or concentrate remain classified in the primary smelting, primary refining, or iron and steel mill, industries regardless of the form of their output. Establishments primarily engaged in secondary smelting and/or secondary refining recover ferrous and nonferrous metals from scrap and/or dross. The output of the secondary smelting and/or secondary refining industries is limited to shapes, such as ingot or billet, that will be further processed. Recovery of metals from scrap often occurs in establishments that are primarily engaged in activities, such as rolling, drawing, extruding, or similar processes.

Excluded from the Primary Metal Manufacturing subsector are establishments primarily engaged in manufacturing ferrous and nonferrous forgings (except ferrous forgings made in steel mills) and stampings. Although forging, stamping, and casting are all methods used to make metal shapes, forging and stamping do not use molten metals and are included in Subsector 332, Fabricated Metal Product Manufacturing. Establishments primarily engaged in operating coke ovens are classified in Industry 32419, Other Petroleum and Coal Products Manufacturing.

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### **3311 Iron and Steel Mills and Ferroalloy Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33111, Iron and Steel Mills and Ferroalloy Manufacturing.

#### **33111 Iron and Steel Mills and Ferroalloy Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) manufacturing ferroalloys; (5) making steel; (6) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (7) making steel and forming pipe and tube.

#### **331111 Iron and Steel Mills**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) making steel; (5) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (6) making steel and forming tube and pipe.

The data published with NAICS code 331111 include the following SIC industries:

3312 Blast furnaces and steel mills (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331111 include establishments primarily engaged in the manufacture of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3311111 Iron and Steel Mills – Fully Integrated**

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

#### **3311112 Iron and Steel Mills – Partially Integrated With a Blast Furnace**

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing ingots and/or semifinished shapes, such as blooms, billets, and rods.

#### **3311113 Iron and Steel Mills – Partially Integrated Without a Blast Furnace**

Establishments primarily engaged in converting pig iron, direct reduced iron, and/or scrap into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

#### **3311114 Iron and Steel Mills – Nonintegrated**

Establishments primarily engaged in producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire from purchased ingots and/or semifinished shapes, such as blooms, billets, and rods.

#### **331112 Electrometallurgical Ferroalloy Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal being made.

The data published with NAICS code 331112 include the following SIC industry:

3313 Electrometallurgical products (pt)

#### **3312 Steel Product Manufacturing From Purchased Steel**

This industry group comprises establishments primarily engaged in manufacturing iron and steel tube and pipe, drawing steel wire, and rolling or drawing shapes from purchased iron or steel.

#### **33121 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel**

This industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

#### **331210 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel**

This U.S. industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

The data published with NAICS code 331210 include the following SIC industry:

3317 Steel pipe and tubes

### **33122 Rolling and Drawing of Purchased Steel**

This industry comprises establishments primarily engaged in rolling and/or drawing steel shapes, such as plate, sheet, strip, rod, and bar, from purchased steel.

#### **331221 Rolled Steel Shape Manufacturing**

This U.S. industry comprises establishments primarily engaged in rolling or drawing shapes (except wire), such as plate, sheet, strip, rod, and bar, from purchased steel.

The data published with NAICS code 331221 include the following SIC industry:

3316 Cold finishing of steel shapes

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331221 do not include establishments primarily engaged in making coke oven and blast furnace products; in making steel and rolling or drawing steel shapes; or in the making of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **331222 Steel Wire Drawing**

This U.S. industry comprises establishments primarily engaged in drawing wire from purchased steel.

The data published with NAICS code 331222 include the following SIC industry:

3315 Steel wire and related products (pt)

### **3313 Alumina and Aluminum Production and Processing**

This NAICS industry group includes establishments classified in NAICS Industry 33131, Alumina and Aluminum Production and Processing.

#### **33131 Alumina and Aluminum Production and Processing**

This industry comprises establishments primarily engaged in one or more of the following: (1) refining alumina; (2) making (i.e., the primary production) aluminum from alumina; (3) recovering aluminum from scrap or dross; (4) alloying purchased aluminum; and (5) manufacturing aluminum primary forms (e.g., bar, foil, pipe, plate, rod, sheet, tube, wire).

##### **331311 Alumina Refining**

This U.S. industry comprises establishments primarily engaged in refining alumina (i.e., aluminum oxide) generally from bauxite.

The data published with NAICS code 331311 include the following SIC industry:

2819 Industrial inorganic chemicals, n.e.c. (pt)

### **331312 Primary Aluminum Production**

This U.S. industry comprises establishments primarily engaged in (1) making aluminum from alumina and/or (2) making aluminum from alumina and rolling, drawing, extruding, or casting the aluminum they make into primary forms (e.g., bar, billet, ingot, plate, rod, sheet, strip). Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

The data published with NAICS code 331312 include the following SIC industry:

3334 Primary aluminum

#### **331314 Secondary Smelting and Alloying of Aluminum**

This U.S. industry comprises establishments primarily engaged in (1) recovering aluminum and aluminum alloys from scrap and/or dross (i.e., secondary smelting) and making billet or ingot (except by rolling) and/or (2) manufacturing alloys, powder, paste, or flake from purchased aluminum.

The data published with NAICS code 331314 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

#### **331315 Aluminum Sheet, Plate, and Foil Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) flat rolling or continuous casting sheet, plate, foil, and welded tube from purchased aluminum and/or (2) recovering aluminum from scrap and flat rolling or continuous casting sheet, plate, foil, and welded tube in integrated mills.

The data published with NAICS code 331315 include the following SIC industry:

3353 Aluminum sheet, plate, and foil (pt)

#### **331316 Aluminum Extruded Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) extruding aluminum bar, pipe, and tube blooms or extruding or drawing tube from purchased aluminum; and/or (2) recovering aluminum from scrap and extruding bar, pipe, and tube blooms or drawing tube in integrated mills.

The data published with NAICS code 331316 include the following SIC industry:

3354 Aluminum extruded products

### **331319 Other Aluminum Rolling and Drawing**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) from purchased aluminum and/or (2) recovering aluminum from scrap and rolling, drawing or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) in integrated mills.

The data published with NAICS code 331319 include the following SIC industries:

3355 Aluminum rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

### **3314 Nonferrous Metal (Except Aluminum) Production and Processing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33141, Nonferrous Metal (Except Aluminum) Smelting and Refining; 33142, Copper Rolling, Drawing, Extruding, and Alloying; and 33149, Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying.

#### **33141 Nonferrous Metal (Except Aluminum) Smelting and Refining**

This industry comprises establishments primarily engaged in (1) smelting ores into nonferrous metals and/or (2) the primary refining of nonferrous metals (except aluminum) using electrolytic or other processes.

#### **331411 Primary Smelting and Refining of Copper**

This U.S. industry comprises establishments primarily engaged in (1) smelting copper ore and/or (2) the primary refining of copper by electrolytic methods or other processes. Establishments in this industry make primary copper and copper-based alloys, such as brass and bronze, from ore or concentrates.

The data published with NAICS code 331411 include the following SIC industry:

3331 Primary copper

#### **331419 Primary Smelting and Refining of Nonferrous Metal (Except Copper and Aluminum)**

This U.S. industry comprises establishments primarily engaged in (1) making (i.e., the primary production) nonferrous metals by smelting ore and/or (2) the primary refining of nonferrous metals by electrolytic methods or other processes.

The data published with NAICS code 331419 include the following SIC industry:

3339 Primary nonferrous metals, n.e.c.

### **33142 Copper Rolling, Drawing, Extruding, and Alloying**

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering copper or copper alloys from scraps; (2) alloying purchased copper; (3) rolling, drawing, or extruding shapes, (e.g., bar, plate, sheet, strip, tube, and wire) from purchased copper; and (4) recovering copper or copper alloys from scrap and rolling drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube, and wire).

#### **331421 Copper Rolling, Drawing, and Extruding**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire)) from purchased copper; and/or (2) recovering copper from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire in integrated mills)).

The data published with NAICS code 331421 include the following SIC industry:

3351 Copper rolling and drawing

#### **331422 Copper Wire (Except Mechanical) Drawing**

This U.S. industry comprises establishments primarily engaged in drawing or drawing and insulating communication and energy wire and cable from purchased copper or in integrated secondary smelting and wire drawing plants.

The data published with NAICS code 331422 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

#### **331423 Secondary Smelting, Refining, and Alloying of Copper**

This U.S. industry comprises establishments primarily engaged in (1) recovering copper and copper alloys from scrap and/or (2) alloying purchased copper. Establishments in this industry make primary forms, such as ingot, wire bar, cake, and slab from copper or copper alloys, such as brass and bronze.

The data published with NAICS code 331423 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

### **33149 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying**

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering nonferrous metals (except copper and aluminum) and nonferrous metal alloys from scrap; (2) alloying purchased

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nonferrous metals (except copper and aluminum); (3) rolling, drawing, and extruding shapes from purchased nonferrous metals (except copper and aluminum); and (4) recovering nonferrous metals from scrap (except copper and aluminum) and rolling, drawing, or extruding shapes in integrated facilities.

### **331491 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, and Extruding**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube) from purchased nonferrous metals) and/or (2) recovering nonferrous metals from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube) in integrated mills.

The data published with NAICS code 331491 include the following SIC industries:

3356 Nonferrous rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

### **331492 Secondary Smelting, Refining, and Alloying of Nonferrous Metal (Except Copper and Aluminum)**

This U.S. industry comprises establishments primarily engaged in (1) alloying purchased nonferrous metals and/or (2) recovering nonferrous metals from scrap. Establishments in this industry make primary forms (e.g., bar, billet, bloom, cake, ingot, slab, slug, wire) using smelting or refining processes.

The data published with NAICS code 331492 include the following SIC industries:

3313 Electrometallurgical products (pt)

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331492 include establishments primarily engaged in the manufacture of other nonferrous additive alloys. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3315 Foundries**

This industry group comprises establishments primarily engaged in pouring molten metal into molds or dies to form castings. Establishments making castings and further manufacturing, such as machining or assembling, a specific manufactured product are classified in the industry of the finished product. Foundries may perform operations, such as cleaning and deburring, on the castings they manufacture. More involved processes, such as tapping,

threading, milling, or machining to tight tolerances, that transform castings into more finished products are classified elsewhere in the manufacturing sector based on the product being made.

Establishments in this industry group make castings from purchased metals or in integrated secondary smelting and casting facilities. When the production of primary metals is combined with making castings, the establishment is classified in 331 with the primary metal being made.

### **33151 Ferrous Metal Foundries**

This industry comprises establishments primarily engaged in pouring molten iron and steel into molds of a desired shape to make castings. Establishments in this industry purchase iron and steel made in other establishments.

#### **331511 Iron Foundries**

This U.S. industry comprises establishments primarily engaged in pouring molten pig iron or iron alloys into molds to manufacture castings, (e.g., cast iron man-hole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

The data published with NAICS code 331511 include the following SIC industries:

3321 Gray iron foundries

3322 Malleable iron foundries

#### **331512 Steel Investment Foundries**

This U.S. industry comprises establishments primarily engaged in manufacturing steel investment castings. Investment molds are formed by covering a wax shape with a refractory slurry. After the refractory slurry hardens, the wax is melted, leaving a seamless mold. Investment molds provide highly detailed, consistent castings. Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331512 include the following SIC industry:

3324 Steel investment foundries

#### **331513 Steel Foundries (Except Investment)**

This U.S. industry comprises establishments primarily engaged in manufacturing steel castings (except steel investment castings). Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331513 include the following SIC industry:

3325 Steel foundries, n.e.c.

### **33152 Nonferrous Metal Foundries**

This industry comprises establishments primarily engaged in pouring and/or introducing molten nonferrous metal, under high pressure, into metal molds or dies to manufacture castings. Establishments in this industry purchase nonferrous metals made in other establishments.

### **331521 Aluminum Die-Casting Foundries**

This U.S. industry comprises establishments primarily engaged in introducing molten aluminum, under high pressure, into molds or dies to make aluminum die-castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331521 include the following SIC industry:

3363 Aluminum die-castings

### **331522 Nonferrous (Except Aluminum) Die-Casting Foundries**

This U.S. industry comprises establishments primarily engaged in introducing molten nonferrous metal (except aluminum), under high pressure, into molds to make nonferrous metal die-castings. Establishments in this industry purchase nonferrous metals made in other establishments.

The data published with NAICS code 331522 include the following SIC industry:

3364 Nonferrous die-casting, except aluminum

### **331524 Aluminum Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten aluminum into molds to manufacture aluminum castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331524 include the following SIC industry:

3365 Aluminum foundries

### **331525 Copper Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten copper into molds to manufacture copper castings. Establishments in this industry purchase copper made in other establishments.

The data published with NAICS code 331525 include the following SIC industry:

3366 Copper foundries

### **331528 Other Nonferrous Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten nonferrous metals (except aluminum and copper) into molds to manufacture nonferrous castings (except aluminum die-castings, nonferrous

(except aluminum) die-castings, aluminum castings, and copper castings). Establishments in this industry purchase nonferrous metals, such as nickel, lead, and zinc, made in other establishments.

The data published with NAICS code 331528 include the following SIC industry:

3369 Nonferrous foundries, n.e.c.

### **332 Fabricated Metal Product Manufacturing**

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture or treating metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

The NAICS structure for this subsector distinguishes the forging and stamping processes in a single industry. The remaining industries, in the subsector, group establishments based on similar combinations of processes used to make products.

The manufacturing performed in the Fabricated Metal Product Manufacturing subsector begins with manufactured metal shapes. The establishments in this sector further fabricate the purchased metal shapes into a product. For instance, the Spring and Wire Product Manufacturing industry starts with wire and fabricates such items.

Within manufacturing there are other establishments that make the same products made by this subsector; only these establishments begin production further back in the production process. These establishments have a more integrated operation. For instance, one establishment may manufacture steel, draw it into wire, and make wire products in the same establishment. Such operations are classified in the Primary Metal Manufacturing subsector.

### **3321 Forging and Stamping**

This NAICS industry group includes establishments classified in NAICS Industry 33211, Forging and Stamping.

### **33211 Forging and Stamping**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing forgings from purchased metals; (2) manufacturing metal custom roll forming products; (3) manufacturing metal stamped and spun products (except automotive, cans, coins); and (4) manufacturing powder metallurgy products. Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished

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product. Metal forging, metal stamping, and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

### **332111 Iron and Steel Forging**

This U.S. industry comprises establishments primarily engaged in manufacturing iron and steel forgings from purchased iron and steel by hammering mill shapes. Establishments making iron and steel forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Iron and steel forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332111 include the following SIC industry:

3462 Iron and steel forgings

### **332112 Nonferrous Forging**

This U.S. industry comprises establishments primarily engaged in manufacturing nonferrous forgings from purchased nonferrous metals by hammering mill shapes. Establishments making nonferrous forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Nonferrous forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332112 include the following SIC industry:

3463 Nonferrous forgings

### **332114 Custom Roll Forming**

This U.S. industry comprises establishments primarily engaged in custom roll forming metal products by use of rotary motion of rolls with various contours to bend or shape the products.

The data published with NAICS code 332114 include the following SIC industry:

3449 Miscellaneous metal work (pt)

### **332115 Crown and Closure Manufacturing**

This U.S. industry comprises establishments primarily engaged in stamping metal crowns and closures, such as bottle caps and home canning lids and rings.

The data published with NAICS code 332115 include the following SIC industry:

3466 Crowns and closures

### **332116 Metal Stamping**

This U.S. industry comprises establishments primarily engaged in manufacturing unfinished metal stampings and spinning unfinished metal products (except crowns, cans, closures, automotive, and coins). Establishments making metal stampings and metal spun products and further manufacturing (e.g., machining, assembling) a specific product are classified in the industry of the finished product. Metal stamping and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

The data published with NAICS code 332116 include the following SIC industry:

3469 Metal stampings, n.e.c. (pt)

### **332117 Powder Metallurgy Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing powder metallurgy products by compacting them in a shaped die and sintering. Establishments in this industry generally make a wide range of parts on a job or order basis.

The data published with NAICS code 332117 include the following SIC industry:

3499 Fabricated metal products, n.e.c. (pt)

### **3322 Cutlery and Handtool Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33221, Cutlery and Handtool Manufacturing.

#### **33221 Cutlery and Handtool Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nonprecious and precious plated metal cutlery and flatware; (2) manufacturing nonpowered hand and edge tools; (3) manufacturing nonpowered handsaws; (4) manufacturing saw blades, all types (including those for sawing machines); and (5) manufacturing metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

#### **332211 Cutlery and Flatware (Except Precious) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonprecious and precious plated metal cutlery and flatware.

The data published with NAICS code 332211 include the following SIC industries:

3421 Cutlery

3914 Silverware and plated ware (pt)

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332211 do not include establishments primarily engaged in the manufacture of hand-operated clippers for human hair. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332212 Hand and Edge Tool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonpowered hand and edge tools (except saws).

The data published with NAICS code 332212 include the following SIC industries:

- 3423 Hand and edge tools, n.e.c.
- 3523 Farm machinery and equipment (pt)
- 3524 Lawn and garden equipment (pt)
- 3545 Machine tool accessories (pt)
- 3699 Electrical equipment and supplies, n.e.c. (pt)
- 3799 Transportation equipment, n.e.c. (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332212 include establishments primarily engaged in the manufacture of wheelbarrows or quality control laser equipment but do not include establishments primarily engaged in the manufacture of tool-type shears or fish wire, an electrical wiring tool. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332213 Saw Blade and Handsaw Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing nonpowered handsaws and/or (2) manufacturing saw blades, all types (including those for power sawing machines).

The data published with NAICS code 332213 include the following SIC industry:

- 3425 Saw blades and handsaws

### **332214 Kitchen Utensil, Pot, and Pan Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal kitchen utensils (except cutting-type), pots, and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

The data published with NAICS code 332214 include the following SIC industry:

- 3469 Metal stampings, n.e.c. (pt)

### **3323 Architectural and Structural Metals Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33231, Plate Work and Fabricated Structural Product Manufacturing; and 33232, Ornamental and Architectural Metal Products Manufacturing.

#### **33231 Plate Work and Fabricated Structural Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) prefabricated metal buildings, panels, and sections; (2) structural metal products; and (3) metal plate work products.

##### **332311 Prefabricated Metal Building and Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated metal buildings, panels, and sections.

The data published with NAICS code 332311 include the following SIC industry:

- 3448 Prefabricated metal buildings

##### **332312 Fabricated Structural Metal Manufacturing**

This U.S. industry comprises establishments primarily engaged in fabricating structural metal products, such as concrete reinforcing bars and fabricated bar joists.

The data published with NAICS code 332312 include the following SIC industries:

- 3441 Fabricated structural metal
- 3449 Miscellaneous metal work (pt)

##### **332313 Plate Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal plate work by cutting, punching, bending, shaping, and welding purchased metal plate.

The data published with NAICS code 332313 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

##### **33232 Ornamental and Architectural Metal Products Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) metal framed windows (i.e., typically using purchased glass) and metal doors; (2) sheet metal work; and (3) ornamental and architectural metal products.

### **332321 Metal Window and Door Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal framed windows (i.e., typically using purchased glass) and metal doors. Examples of products made by these establishments are metal door frames; metal framed window and door screens; metal molding and trim (except automotive); and metal curtain walls.

The data published with NAICS code 332321 include the following SIC industries:

- 2499 Wood products, n.e.c. (pt)
- 3442 Metal doors, sash, and trim
- 3449 Miscellaneous metal work (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332321 include establishments primarily engaged in the manufacture of metal finished moldings for mirrors and pictures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332322 Sheet Metal Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sheet metal work (except stampings).

The data published with NAICS code 332322 include the following SIC industry:

- 3444 Sheet metal work (pt)

### **332323 Ornamental and Architectural Metal Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ornamental and architectural metal work, such as staircases, metal open steel flooring, fire escapes, railings, and scaffolding.

The data published with NAICS code 332323 include the following SIC industries:

- 3446 Architectural metal work
- 3449 Miscellaneous metal work (pt)
- 3523 Farm machinery and equipment (pt)

### **3324 Boiler, Tank, and Shipping Container Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33241, Power Boiler and Heat Exchanger Manufacturing; 33242, Metal Tank (Heavy Gauge) Manufacturing; and 33243, Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing.

### **33241 Power Boiler and Heat Exchanger Manufacturing**

This industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

### **332410 Power Boiler and Heat Exchanger Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

The data published with NAICS code 332410 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332410 do not include establishments primarily engaged in the manufacture of nuclear control drive mechanisms. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33242 Metal Tank (Heavy Gauge) Manufacturing**

This industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

### **332420 Metal Tank (Heavy Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

The data published with NAICS code 332420 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

### **33243 Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing**

This industry comprises establishments primarily engaged in forming light gauge metal containers.

### **332431 Metal Can Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal cans, lids, and ends.

The data published with NAICS code 332431 include the following SIC industry:

- 3411 Metal cans

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### **332439 Other Metal Container Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal (light gauge) containers (except cans).

The data published with NAICS code 332439 include the following SIC industries:

- 3412 Metal barrels, drums, and pails
- 3429 Hardware, n.e.c. (pt)
- 3444 Sheet metal work (pt)
- 3499 Fabricated metal products, n.e.c. (pt)
- 3537 Industrial trucks and tractors (pt)

### **3325 Hardware Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33251, Hardware Manufacturing.

#### **33251 Hardware Manufacturing**

This industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

#### **332510 Hardware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

The data published with NAICS code 332510 include the following SIC industries:

- 3429 Hardware, n.e.c. (pt)
- 3499 Fabricated metal products, n.e.c. (pt)

### **3326 Spring and Wire Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33261, Spring and Wire Product Manufacturing.

#### **33261 Spring and Wire Product Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing steel springs by forming, such as cutting, bending, and heat winding metal rod or strip stock and/or (2) manufacturing wire springs and fabricated wire products from wire drawn elsewhere (except watch and clock springs).

#### **332611 Spring (Heavy Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing heavy gauge springs by forming, such as cutting, bending, and heat winding rod or strip stock.

The data published with NAICS code 332611 include the following SIC industry:

- 3493 Steel springs, except wire

### **332612 Spring (Light Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing light gauge springs from purchased wire or strip.

The data published with NAICS code 332612 include the following SIC industry:

- 3495 Wire springs (pt)

### **332618 Other Fabricated Wire Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated wire products (except springs) made from purchased wire.

The data published with NAICS code 332618 include the following SIC industries:

- 3315 Steel wire and related products (pt)
- 3399 Primary metal products, n.e.c. (pt)
- 3496 Miscellaneous fabricated wire products

### **3327 Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33271, Machine Shops; and 33272, Turned Product and Screw, Nut, and Bolt Manufacturing.

#### **33271 Machine Shops**

This industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

#### **332710 Machine Shops**

This U.S. industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

The data published with NAICS code 332710 include the following SIC industry:

- 3599 Industrial machinery, n.e.c. (pt)

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### **33272 Turned Product and Screw, Nut, and Bolt Manufacturing**

This industry comprises establishments primarily engaged in (1) machining precision turned products or (2) manufacturing metal bolts, nuts, screws, rivets, and other industrial fasteners. Included in this industry are establishments primarily engaged manufacturing parts for machinery and equipment on a customized basis.

### **332721 Precision Turned Product Manufacturing**

This U.S. industry comprises establishments known as precision turned manufacturers primarily engaged in machining precision products of all materials on a job or order basis. Generally precision turned product jobs are large volume using machines, such as automatic screw machines, rotary transfer machines, computer numerically controlled (CNC) lathes, or turning centers.

The data published with NAICS code 332721 include the following SIC industry:

3451 Screw machine products

### **332722 Bolt, Nut, Screw, Rivet, and Washer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal bolts, nuts, screws, rivets, and washers, and other industrial fasteners using machines, such as headers, threaders, and nut forming machines.

The data published with NAICS code 332722 include the following SIC industry:

3452 Bolts, nuts, rivets, and washers

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332722 do not include establishments primarily engaged in the manufacture of turnbuckles and hose clamps. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3328 Coating, Engraving, Heat Treating, and Allied Activities**

This NAICS industry group includes establishments classified in NAICS Industry 33281, Coating, Engraving, Heat Treating, and Allied Activities.

### **33281 Coating, Engraving, Heat Treating, and Allied Activities**

This industry comprises establishments primarily engaged in one or more of the following: (1) heat treating metals and metal products; (2) enameling, lacquering, varnishing metals and metal products; (3) hot dip galvanizing metals and metal products; (4) engraving, chasing, or

etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (5) powder coating metals and metal products; (6) electroplating, plating, anodizing, coloring, and finishing metals and metal products; and (7) providing other metal surfacing services for the trade. Establishments in this industry coat engravings and heat treat metals and metal formed products fabricated elsewhere.

### **332811 Metal Heat Treating**

This U.S. industry comprises establishments primarily engaged in heat treating, such as annealing, tempering, and brazing, metals and metal products for the trade.

The data published with NAICS code 332811 include the following SIC industry:

3398 Metal heat treating

### **332812 Metal Coating, Engraving (Except Jewelry and Silverware), and Allied Services to Manufacturers**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) enameling, lacquering, and varnishing metals and metal products; (2) hot dip galvanizing metals and metal products; (3) engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (4) powder coating metals and metal products; and (5) providing other metal surfacing services for the trade.

The data published with NAICS code 332812 include the following SIC industry:

3479 Metal coating and allied services (pt)

### **332813 Electroplating, Plating, Polishing, Anodizing, and Coloring**

This U.S. industry comprises establishments primarily engaged in electroplating, plating, anodizing, coloring, buffing, polishing, cleaning, and sandblasting metals and metal products for the trade.

The data published with NAICS code 332813 include the following SIC industry:

3471 Plating and polishing

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332813 do not include establishments primarily engaged in laminating steel. The NAICS definitions will be fully implemented with the 2002 Economic Census.

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### **3329 Other Fabricated Metal Product Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, and nuts and bolts).

#### **33291 Metal Valve Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following metal valves: (1) industrial valves; (2) fluid power valves and hose fittings; (3) plumbing fixture fittings and trim; and (4) other metal valves and pipe fittings.

#### **332911 Industrial Valve Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial valves and valves for water works and municipal water systems.

The data published with NAICS code 332911 include the following SIC industries:

3491 Industrial valves

#### **332912 Fluid Power Valve and Hose Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power valves and hose fittings.

The data published with NAICS code 332912 include the following SIC industries:

3492 Fluid power valves and hose fittings

3728 Aircraft parts and equipment, n.e.c. (pt)

#### **332913 Plumbing Fixture Fitting and Trim Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal and plastics plumbing fixture fittings and trim, such as faucets, flush valves, and shower heads.

The data published with NAICS code 332913 include the following SIC industry:

3432 Plumbing fittings and brass goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332913 include establishments primarily engaged in the manufacture of lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332919 Other Metal Valve and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal valves (except industrial valves, fluid power valves, fluid power hose fittings, and plumbing fixture fittings and trim).

The data published with NAICS code 332919 include the following SIC industries:

3429 Hardware, n.e.c. (pt)

3494 Valves and pipe fittings, n.e.c. (pt)

3499 Fabricated metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332919 do not include establishments primarily engaged in manufacturing lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33299 All Other Fabricated Metal Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metal products, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts and bolts, and metal valves).

#### **332991 Ball and Roller Bearing Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ball and roller bearings of all materials.

The data published with NAICS code 332991 include the following SIC industry:

3562 Ball and roller bearings

#### **332992 Small Arms Ammunition Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small arms ammunition.

The data published with NAICS code 332992 include the following SIC industry:

3482 Small arms ammunition

#### **332993 Ammunition (Except Small Arms) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ammunition (except small arms). Examples of products made by these establishments are bombs, depth charges, rockets (except guided missiles), grenades, mines, and torpedoes.

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The data published with NAICS code 332993 include the following SIC industry:

3483 Ammunition, except small arms, n.e.c.

### **332994 Small Arms Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small firearms that are carried and fired by the individual.

The data published with NAICS code 332994 include the following SIC industry:

3484 Small arms

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332995 Other Ordnance and Accessories Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ordnance (except small arms) and accessories.

The data published with NAICS code 332995 include the following SIC industry:

3489 Ordnance and accessories, n.e.c.

### **332996 Fabricated Pipe and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in fabricating (such as cutting, threading and bending) metal pipes and pipe fittings made from purchased metal pipe.

The data published with NAICS code 332996 include the following SIC industries:

3353 Aluminum sheet, plate, and foil (pt)

3498 Fabricated pipe and fittings

### **332997 Industrial Pattern Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial patterns.

The data published with NAICS code 332997 include the following SIC industry:

3543 Industrial patterns

### **332998 Enameled Iron and Metal Sanitary Ware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing enameled iron and metal sanitary ware.

The data published with NAICS code 332998 include the following SIC industry:

3431 Metal sanitary ware

### **332999 All Other Miscellaneous Fabricated Metal Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts, and bolts, metal valves, ball and roller bearings, ammunition, small arms and other ordnances, fabricated pipes and pipe fittings, industrial patterns, and enameled iron and metal sanitary ware).

The data published with NAICS code 332999 include the following SIC industries:

3291 Abrasive products (pt)

3432 Plumbing fixture fittings and trim

3494 Valves and pipe fittings, n.e.c. (pt)

3497 Metal foil and leaf (pt)

3499 Fabricated metal products, n.e.c. (pt)

3537 Industrial trucks and tractors (pt)

3599 Industrial machinery, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332999 do not include establishments primarily engaged in manufacturing fire-place fixtures, traps, handcuffs and leg irons, ladder jacks, or other like metal products, or primarily engaged in manufacturing precious metal hollowware. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333 Machinery Manufacturing**

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes, such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it

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typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in making machinery designed for particular applications. Thus, design is considered to be part of the production process for the purpose of implementing NAICS. The NAICS structure reflects this by defining industries and industry groups that make machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (i.e., general-purpose machinery) and machinery that is designed to be used in a particular industry (i.e., special-purpose machinery). Three industry groups consist of special-purpose machinery—Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups make general-purpose machinery: Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing; Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General-Purpose Machinery Manufacturing.

### **3331 Agriculture, Construction, and Mining Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33311, Agricultural Implement Manufacturing; 33312, Construction Machinery Manufacturing; and 33313, Mining and Oil and Gas Field Machinery Manufacturing.

#### **33311 Agricultural Implement Manufacturing**

This industry comprises establishments primarily engaged in manufacturing farm machinery and equipment, powered mowing equipment, and other powered home lawn and garden equipment.

#### **333111 Farm Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing agricultural and farm machinery and equipment, and other turf and grounds care equipment, including planting, harvesting, and grass mowing equipment (except lawn and garden-type).

The data published with NAICS code 333111 include the following SIC industry:

3523 Farm machinery and equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

NAICS. Data for NAICS industry 333111 do not include establishments primarily engaged in manufacturing cotton ginning machinery. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing powered lawnmowers, lawn and garden tractors, and other home lawn and garden equipment, such as tillers, shredders, and yard vacuums and blowers.

The data published with NAICS code 333112 include the following SIC industry:

3524 Lawn and garden equipment (pt)

#### **33312 Construction Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

#### **333120 Construction Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

The data published with NAICS code 333120 include the following SIC industry:

3531 Construction machinery (pt)

#### **33313 Mining and Oil and Gas Field Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing oil and gas field and underground mining machinery and equipment.

#### **333131 Mining Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing underground mining machinery and equipment, such as coal breakers, mining cars, core drills, coal cutters, rock drills and (2) manufacturing mineral beneficiating machinery and equipment used in surface or underground mines.

The data published with NAICS code 333131 include the following SIC industry:

3532 Mining machinery

#### **333132 Oil and Gas Field Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing oil and gas field machinery and equipment, such as oil and gas field drilling machinery and equipment; oil and gas field production machinery and equipment; and oil and gas field derricks and (2) manufacturing water well drilling machinery.

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The data published with NAICS code 333132 include the following SIC industry:

3533 Oil field machinery

### **3332 Industrial Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33321, Sawmill and Woodworking Machinery Manufacturing; 33322, Plastics and Rubber Industry Machinery Manufacturing; and 33329, Other Industrial Machinery Manufacturing.

#### **33321 Sawmill and Woodworking Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

#### **333210 Sawmill and Woodworking Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

The data published with NAICS code 333210 include the following SIC industry:

3553 Woodworking machinery

#### **33322 Plastics and Rubber Industry Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

#### **333220 Plastics and Rubber Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

The data published with NAICS code 333220 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)

#### **33329 Other Industrial Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction, mining, sawmill and woodworking, and plastics and rubber products making machinery).

### **333291 Paper Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing paper industry machinery for making paper and paper products, such as pulp making machinery, paper and paperboard making machinery, and paper and paperboard converting machinery.

The data published with NAICS code 333291 include the following SIC industry:

3554 Paper industries machinery

### **333292 Textile Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing textile machinery for making thread, yarn, and fiber.

The data published with NAICS code 333292 include the following SIC industries:

3552 Textile machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

### **333293 Printing Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing printing and bookbinding machinery and equipment, such as printing presses, type-setting machinery, and bindery machinery.

The data published with NAICS code 333293 include the following SIC industries:

3555 Printing trades machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

### **333294 Food Product Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing food and beverage manufacturing-type machinery and equipment, such as dairy product plant machinery and equipment (e.g., homogenizers, pasteurizers, ice cream freezers), bakery machinery and equipment (e.g., dough mixers, bake ovens, pastry rolling machines), meat and poultry processing and preparation machinery, and other commercial food products machinery (e.g., slicers, choppers, and mixers).

The data published with NAICS code 333294 include the following SIC industry:

3556 Food products machinery

### **333295 Semiconductor Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wafer processing equipment, semiconductor assembly and packaging equipment, and other semiconductor making machinery.

The data published with NAICS code 333295 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)

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### **333298 All Other Industrial Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction and mining machinery, sawmill and woodworking machinery, plastics and rubber making machinery, paper and paperboard making machinery, textile machinery, printing machinery and equipment, food manufacturing-type machinery, and semiconductor making machinery).

The data published with NAICS code 333298 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3639 Household appliances, n.e.c. (pt)

### **3333 Commercial and Service Industry Machinery Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33331, Commercial and Service Industry Machinery Manufacturing.

### **33331 Commercial and Service Industry Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and drycleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

### **333311 Automatic Vending Machine Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing coin, token, currency, or magnetic card operated vending machines and/or (2) manufacturing coin operated mechanism for machines, such as vending machines, lockers, and laundry machines.

The data published with NAICS code 333311 include the following SIC industry:

3581 Automatic merchandising machines

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333311 do not include establishments primarily engaged in the manufacture of change making machines. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333312 Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and industrial laundry and drycleaning equipment and pressing machines.

The data published with NAICS code 333312 include the following SIC industry:

3582 Commercial laundry equipment

### **333313 Office Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing office machinery (except computers and photocopying equipment), such as mail-handling machinery and equipment, calculators, typewriters, and dedicated word processing equipment.

The data published with NAICS code 333313 include the following SIC industries:

3578 Calculating and accounting equipment (pt)

3579 Office machines, n.e.c. (pt)

### **333314 Optical Instrument and Lens Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing optical instruments and lens, such as binoculars, microscopes (except electron, proton), telescopes, prisms, and lenses (except ophthalmic); (2) coating or polishing lenses (except ophthalmic); and (3) mounting lenses (except ophthalmic).

The data published with NAICS code 333314 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3827 Optical instruments and lenses

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333314 include establishments primarily engaged in the manufacture of sighting and tracking laser products.

### **333315 Photographic and Photocopying Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing photographic and photocopying equipment, such as cameras (except television, video, digital projectors, film developing equipment, photocopying equipment, and microfilm equipment).

The data published with NAICS code 333315 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3861 Photographic equipment and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333315 include establishments primarily engaged in the manufacture of photographic laser products.

### **333319 Other Commercial and Service Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and service industry equipment (except automatic vending machines, commercial laundry, drycleaning and pressing machines, office machinery, optical instruments and lenses, and photographic and photocopying equipment).

The data published with NAICS code 333319 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3589 Service industry machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333319 do not include establishments primarily engaged in the manufacture of beauty and barbershop equipment, except chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3334 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33341, Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing.

### **33341 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing ventilating, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

### **333411 Air Purification Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing stationary air purification equipment, such as industrial dust and fume collection equipment, electrostatic precipitation equipment, warm air furnace filters, air washers, and other dust collection equipment.

The data published with NAICS code 333411 include the following SIC industry:

3564 Blowers and fans (pt)

### **333412 Industrial and Commercial Fan and Blower Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing attic fans and industrial and commercial fans and blowers, such as commercial exhaust fans and commercial ventilating fans.

The data published with NAICS code 333412 include the following SIC industry:

3564 Blowers and fans (pt)

### **333414 Heating Equipment (Except Warm Air Furnaces) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing heating equipment (except electric and warm air furnaces), such as heating boilers, heating stoves, floor and wall furnaces, and wall and baseboard heating units.

The data published with NAICS code 333414 include the following SIC industries:

3433 Heating equipment, except electric

3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333414 do not include establishments primarily engaged in the manufacture of cooling towers of wood, metal, or sheet metal, or the manufacture of electric swimming pool heaters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing air-conditioning (except motor vehicle) and warm air furnace equipment and/or (2) manufacturing commercial and industrial refrigeration and freezer equipment.

The data published with NAICS code 333415 include the following SIC industries:

3443 Fabricated plate work, boiler shops (pt)

3585 Refrigeration and heating equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

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NAICS. Data for NAICS industry 333415 include establishments primarily engaged in the manufacture of metal cooling towers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3335 Metalworking Machinery Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33351, Metalworking Machinery Manufacturing.

#### **33351 Metalworking Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing metalworking machinery, such as metal cutting and metal forming machine tools; cutting tools; and accessories for metalworking machinery; special dies, tools, jigs, and fixtures; industrial molds; rolling mill machinery; assembly machinery; coil handling, conversion, or straightening equipment; and wire drawing and fabricating machines.

##### **333511 Industrial Mold Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial molds for casting metals or forming other materials, such as plastics, glass, or rubber.

The data published with NAICS code 333511 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

##### **333512 Machine Tool (Metal Cutting Types) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal cutting machine tools (except handtools).

The data published with NAICS code 333512 include the following SIC industries:

3541 Machine tools, metal cutting types

3699 Electrical equipment and supplies, n.e.c. (pt)

##### **333513 Machine Tool (Metal Forming Types) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal forming machine tools (except handtools), such as punching, sheering, bending, forming, pressing, forging and die-casting machines.

The data published with NAICS code 333513 include the following SIC industries:

3542 Machine tools, metal forming types

#### **333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing**

This U.S. industry comprises establishments, known as tool and die shops, primarily engaged in manufacturing special tools and fixtures, such as cutting dies and jigs.

The data published with NAICS code 333514 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

#### **333515 Cutting Tool and Machine Tool Accessory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing accessories and attachments for metal cutting and metal forming machine tools.

The data published with NAICS code 333515 include the following SIC industry:

3545 Machine tool accessories (pt)

#### **333516 Rolling Mill Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rolling mill machinery and equipment for metal production.

The data published with NAICS code 333516 include the following SIC industry:

3547 Rolling mill machinery

#### **333518 Other Metalworking Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal working machinery (except industrial molds; metal cutting machine tools; metal forming machine tools; special dies and tools, die sets, jigs, and fixtures; cutting tools and machine tool accessories; and rolling mill machinery and equipment).

The data published with NAICS code 333518 include the following SIC industry:

3549 Metalworking machinery, n.e.c.

#### **3336 Engine, Turbine, and Power Transmission Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33361, Engine, Turbine, and Power Transmission Equipment Manufacturing.

##### **33361 Engine, Turbine, and Power Transmission Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive gasoline and aircraft).

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### **333611 Turbine and Turbine Generator Set Units Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing turbines (except aircraft); and complete turbine generator set units, such as steam, hydraulic, gas, and wind.

The data published with NAICS code 333611 include the following SIC industry:

3511 Turbines and turbine generator sets

### **333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gears, speed changers, and industrial high-speed drives (except hydrostatic).

The data published with NAICS code 333612 include the following SIC industry:

3566 Speed changers, drives, and gears

### **333613 Mechanical Power Transmission Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing mechanical power transmission equipment (except motor vehicle and aircraft), such as plain bearings, brakes and clutches (except motor vehicle and electromagnetic industrial control), couplings, joints, and drive chains.

The data published with NAICS code 333613 include the following SIC industry:

3568 Power transmission equipment, n.e.c.

### **333618 Other Engine Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing internal combustion engines (except automotive gasoline and aircraft).

The data published with NAICS code 333618 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

### **3339 Other General-Purpose Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33391, Pump and Compressor Manufacturing; 33392, Material Handling Equipment Manufacturing; and 33399, All Other General-Purpose Machinery Manufacturing.

### **33391 Pump and Compressor Manufacturing**

This industry comprises establishments primarily engaged in manufacturing pumps and compressors, such as general-purpose air and gas compressors, nonagricultural spraying and dusting equipment, general-purpose pumps and pumping equipment (except fluid power pumps and motors), and measuring and dispensing pumps.

#### **333911 Pump and Pumping Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose pumps and pumping equipment (except fluid power pumps and motors), such as reciprocating pumps, turbine pumps, centrifugal pumps, rotary pumps, diaphragm pumps, domestic water system pumps, oil well and oil field pumps and sump pumps.

The data published with NAICS code 333911 include the following SIC industries:

3561 Pumps and pumping equipment

3743 Railroad equipment (pt)

#### **333912 Air and Gas Compressor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose air and gas compressors, such as reciprocating compressors, centrifugal compressors, vacuum pumps (except laboratory), and nonagricultural spraying and dusting compressors and spray gun units.

The data published with NAICS code 333912 include the following SIC industry:

3563 Air and gas compressors

#### **333913 Measuring and Dispensing Pump Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and dispensing pumps, such as gasoline pumps and lubricating oil measuring and dispensing pumps.

The data published with NAICS code 333913 include the following SIC industry:

3586 Measuring and dispensing pumps

#### **33392 Material Handling Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing material handling equipment, such as elevators and moving stairs; conveyors and conveying equipment; overhead traveling cranes, hoists, and monorail systems; and industrial trucks, tractors, trailers, and stacker machinery.

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### **333921 Elevator and Moving Stairway Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing elevators and moving stairways.

The data published with NAICS code 333912 include the following SIC industry:

3534 Elevators and moving stairways

### **333922 Conveyor and Conveying Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing conveyors and conveying equipment, such as gravity conveyors, trolley conveyors, tow conveyors, pneumatic tube conveyors, carousel conveyors, farm conveyors, and belt conveyors.

The data published with NAICS code 333922 include the following SIC industries:

3523 Farm machinery and equipment (pt)

3535 Conveyors and conveying equipment

### **333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing overhead traveling cranes, hoists, and monorail systems.

The data published with NAICS code 333923 include the following SIC industries:

3531 Construction machinery (pt)

3536 Hoists, cranes, and monorails

### **333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial trucks, tractors, trailers, and stackers (i.e., truck-type) such as forklifts, pallet loaders and unloaders, and portable loading docks.

The data published with NAICS code 333924 include the following SIC industry:

3537 Industrial trucks and tractors (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33399 All Other General-Purpose Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilation, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; and material handling equipment).

#### **333991 Power-Driven Handtool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power-driven (e.g., battery, corded, pneumatic) handtools, such as drills, screwguns, circular saws, chain saws, staplers, and nailers.

The data published with NAICS code 333991 include the following SIC industry:

3546 Power-driven handtools

#### **333992 Welding and Soldering Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing welding and soldering equipment and accessories (except transformers), such as arc, resistance, gas, plasma, laser, electron beam, and ultrasonic welding equipment; welding electrodes; coated or cored welding wire; and soldering equipment (except handheld).

The data published with NAICS code 333992 include the following SIC industries:

3548 Welding apparatus (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

#### **333993 Packaging Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing packaging machinery, such as wrapping, bottling, canning, and labeling machinery.

The data published with NAICS code 333993 include the following SIC industry:

3565 Packaging machinery

#### **333994 Industrial Process Furnace and Oven Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial process furnaces, ovens, induction and dielectric heating equipment, and kilns (except cement, chemical, wood).

The data published with NAICS code 333994 include the following SIC industry:

3567 Industrial furnaces and ovens

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### **333995 Fluid Power Cylinder and Actuator Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) cylinders and actuators.

The data published with NAICS code 333995 include the following SIC industries:

3593 Fluid power cylinders and actuators

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333995 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333996 Fluid Power Pump and Motor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) pumps and motors.

The data published with NAICS code 333996 include the following SIC industries:

3594 Fluid power pumps and motors

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333995 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333997 Scale and Balance (Except Laboratory) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing scales and balances (except laboratory).

The data published with NAICS code 333997 include the following SIC industry:

3596 Scales and balances, except laboratory

### **333999 All Other Miscellaneous General-Purpose Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilating, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery;

engines, turbines, and power transmission equipment; pumps and compressors; material handling equipment; power-driven handtools; welding and soldering equipment; packaging machinery; industrial process furnaces and ovens; fluid power cylinders and actuators; fluid power pumps and motors; and scales and balances).

The data published with NAICS code 333999 include the following SIC industries:

3569 General industrial machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

### **334 Computer and Electronic Product Manufacturing**

Industries in the Computer and Electronic Product Manufacturing subsector group establishments that manufacture computers, computer peripherals, communications equipment, and similar electronic products, and establishments that manufacture components for such products. The Computer and Electronic Product Manufacturing industries have been combined in the hierarchy of NAICS because of the economic significance they have attained. Their rapid growth suggests that they will become even more important to the economies of all three North American countries in the future, and in addition their manufacturing processes are fundamentally different from the manufacturing processes of other machinery and equipment. The design and use of integrated circuits and the application of highly specialized miniaturization technologies are common elements in the production technologies of the computer and electronic subsector. Convergence of technology motivates this NAICS subsector. Digitalization of sound recording, for example, causes both the medium (the compact disc) and the equipment to resemble the technologies for recording, storing, transmitting, and manipulating data. Communications technology and equipment have been converging with computer technology. When technologically related components are in the same sector, it makes it easier to adjust the classification for future changes, without needing to redefine its basic structure. The creation of the Computer and Electronic Product Manufacturing subsector will assist in delineating new and emerging industries because the activities that will serve as the probable sources of new industries, such as computer manufacturing and communications equipment manufacturing, or computers and audio equipment are brought together. As new activities emerge, they are less likely, therefore, to cross the subsector boundaries of the classification.

### **3341 Computer and Peripheral Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33411, Computer and Peripheral Equipment Manufacturing.

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### **33411 Computer and Peripheral Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers; and computer peripheral equipment, such as storage devices, printers, monitors, input/output devices and terminals. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

#### **334111 Electronic Computer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and contain at least analog, control, and programming elements. The manufacture of computers includes the assembly or integration of processors, coprocessors, memory, storage, and input/output devices into a user-programmable final product.

The data published with NAICS code 334111 include the following SIC industry:

3571 Electronic computers

#### **334112 Computer Storage Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media. Examples of products made by these establishments are CD-ROM drives, floppy disk drives, hard disk drives, and tape storage and backup units.

The data published with NAICS code 334112 include the following SIC industry:

3572 Computer storage devices

#### **334113 Computer Terminal Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer terminals. Computer terminals are input/output devices that connect with a central computer for processing.

The data published with NAICS code 334113 include the following SIC industry:

3575 Computer terminals

#### **334119 Other Computer Peripheral Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer peripheral equipment (except storage devices and computer terminals).

The data published with NAICS code 334119 include the following SIC industries:

3577 Computer peripheral equipment, n.e.c.

3578 Calculating and accounting equipment (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334119 include establishments primarily engaged in the manufacture of laser products.

#### **3342 Communications Equipment Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33421, Telephone Apparatus Manufacturing; 33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing; and 33429, Other Communications Equipment Manufacturing.

#### **33421 Telephone Apparatus Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

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### **334210 Telephone Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

The data published with NAICS code 334210 include the following SIC industry:

3661 Telephone and telegraph apparatus (pt)

### **33422 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

### **334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

The data published with NAICS code 334220 include the following SIC industries:

3663 Radio and TV communications equipment

3679 Electronic components, n.e.c. (pt)

### **33429 Other Communications Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).

### **334290 Other Communications Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, radio and television broadcast, and wireless communications equipment).

The data published with NAICS code 334290 include the following SIC industry:

3669 Communications equipment, n.e.c.

### **3343 Audio and Video Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33431, Audio and Video Equipment Manufacturing.

### **33431 Audio and Video Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

### **334310 Audio and Video Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

The data published with NAICS code 334310 include the following SIC industry:

3651 Household audio and video equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334310 do not include establishments primarily engaged in the manufacture of radio headphones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3344 Semiconductor and Other Electronic Component Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33441, Semiconductor and Other Electronic Component Manufacturing.

### **33441 Semiconductor and Other Electronic Component Manufacturing**

This industry comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products

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made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

### **334411 Electron Tube Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electron tubes and parts (except glass blanks). Examples of products made by these establishments are cathode ray tubes (i.e., picture tubes), klystron tubes, magnetron tubes, and traveling wave tubes.

The data published with NAICS code 334411 include the following SIC industries:

3671 Electron tubes

### **334412 Bare Printed Circuit Board Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing bare (i.e., rigid or flexible) printed circuit boards without mounted electronic components. These establishments print, perforate, plate, screen, etch, or photoprint interconnecting pathways for electric current on laminates.

The data published with NAICS code 334412 include the following SIC industry:

3672 Printed circuit boards

### **334413 Semiconductor and Related Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing semiconductors and related solid state devices. Examples of products made by these establishments are integrated circuits, memory chips, microprocessors, diodes, transistors, solar cells, and other optoelectronic devices.

The data published with NAICS code 334413 include the following SIC industry:

3674 Semiconductors and related devices

### **334414 Electronic Capacitor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic fixed and variable capacitors and condensers.

The data published with NAICS code 334414 include the following SIC industry:

3675 Electronic capacitors

### **334415 Electronic Resistor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic resistors, such as fixed and variable resistors, resistor networks, thermistors, and varistors.

The data published with NAICS code 334415 include the following SIC industry:

3676 Electronic resistors

### **334416 Electronic Coil, Transformer, and Other Inductor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic inductors, such as coils and transformers.

The data published with NAICS code 334416 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3677 Electronic coils and transformers

3825 Instruments to measure electricity (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334416 include establishments primarily engaged in the manufacture of telephone transformers or portable instrument transformers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334417 Electronic Connector Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic connectors, such as coaxial, cylindrical, rack and panel, pin and sleeve, printed circuit and fiber optic.

The data published with NAICS code 334417 include the following SIC industry:

3678 Electronic connectors

### **334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing**

This U.S. industry comprises establishments primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.

The data published with NAICS code 334418 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3679 Electronic components, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334418 do not include

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establishments primarily engaged in the manufacture of plotter controllers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334419 Other Electronic Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic components (except electron tubes; bare printed circuit boards; semiconductors and related devices; electronic capacitors; electronic resistors; coils, transformers and other inductors; connectors; and loaded printed circuit boards).

The data published with NAICS code 334419 include the following SIC industry:

3679 Electronic components, n.e.c. (pt)

### **3345 Navigational, Measuring, Medical, and Control Instruments Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33451, Navigational, Measuring, Medical, and Control Instruments Manufacturing.

#### **33451 Navigational, Measuring, Medical, and Control Instruments Manufacturing**

This industry comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

#### **334510 Electromedical and Electrotherapeutic Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus, such as magnetic resonance imaging equipment, medical ultrasound equipment, pacemakers, hearing aids, electrocardiographs, and electromedical endoscopic equipment.

The data published with NAICS code 334510 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

3845 Electromedical equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334510 include establishments primarily engaged in the manufacture of electro-medical laser products.

#### **334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing search, detection, navigation, guidance, aeronautical, and nautical systems and instruments. Examples of products made by these establishments are aircraft instruments (except engine), flight recorders, navigational instruments and systems, radar systems and equipment, and sonar systems and equipment.

The data published with NAICS code 334511 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3812 Search and navigation equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334511 include establishments primarily engaged in the manufacture of search and detection laser products.

#### **334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use**

This U.S. industry comprises establishments primarily engaged in manufacturing automatic controls and regulators for applications, such as heating, air-conditioning, refrigeration and appliances.

The data published with NAICS code 334512 include the following SIC industry:

3822 Environmental controls

#### **334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and related devices for measuring, displaying, indicating, recording, transmitting, and controlling industrial process variables. These instruments measure, display or control (monitor, analyze, and so forth) industrial process variables, such as temperature, humidity, pressure, vacuum, combustion, flow, level, viscosity, density, acidity, concentration, and rotation.

The data published with NAICS code 334513 include the following SIC industry:

3823 Process control instruments

#### **334514 Totalizing Fluid Meter and Counting Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing totalizing (i.e., registering) fluid meters and counting devices. Examples of products made

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by these establishments are gas consumption meters, water consumption meters, parking meters, taxi meters, motor vehicle gauges, and fare collection equipment.

The data published with NAICS code 334514 include the following SIC industry:

3824 Fluid meters and counting devices

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334514 do not include establishments primarily engaged in the manufacture of automotive ammeters and voltmeters or motor vehicle gauges. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments for measuring and testing the characteristics of electricity and electrical signals. Examples of products made by these establishments are circuit and continuity testers, volt meters, ohm meters, wattmeters, multimeters, and semiconductor test equipment.

The data published with NAICS code 334515 include the following SIC industry:

3825 Instruments to measure electricity (pt)

### **334516 Analytical Laboratory Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and instrumentation systems for laboratory analysis of the chemical or physical composition or concentration of samples of solid, fluid, gaseous, or composite material.

The data published with NAICS code 334516 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3826 Analytical instruments

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334516 include establishments primarily engaged in the manufacture of analytical and scientific laser products.

### **334517 Irradiation Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing irradiation apparatus and tubes for applications, such as medical diagnostic, medical therapeutic, industrial, research and scientific evaluation. Irradiation can take the form of beta-rays, gamma-rays, X-rays, or other ionizing radiation.

The data published with NAICS code 334517 include the following SIC industry:

3844 X-ray apparatus and tubes

### **334518 Watch, Clock, and Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling clocks; watches; timing mechanisms for clockwork operated devices; time clocks; time and date recording devices; and clock and watch parts (except crystals), such as springs, jewels, and modules.

The data published with NAICS code 334518 include the following SIC industries:

3495 Wire springs (pt)

3579 Office machines, n.e.c. (pt)

3873 Watches, clocks, and watchcases

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334518 do not include establishments primarily engaged in the manufacture of electronic chronometers or watch jewels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334519 Other Measuring and Controlling Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and controlling devices (except search, detection, navigation, guidance, aeronautical, and nautical instruments and systems; automatic environmental controls for residential, commercial, and appliance use; instruments for measurement, display, and control of industrial process variables; totalizing fluid meters and counting devices; instruments for measuring and testing electricity and electrical signals; analytical laboratory instruments; watches, clocks, and parts; irradiation equipment; and electromedical and electrotherapeutic apparatus).

The data published with NAICS code 334519 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3829 Measuring and controlling devices, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334519 include establishments primarily engaged in the manufacture of commercial geophysical, meteorological, survey, and drafting laser products.

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### **3346 Manufacturing and Reproducing Magnetic and Optical Media**

This NAICS industry group includes establishments classified in NAICS Industry 33461, Manufacturing and Reproducing Magnetic and Optical Media.

#### **33461 Manufacturing and Reproducing Magnetic and Optical Media**

This industry comprises establishments primarily engaged in (1) manufacturing optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or (2) mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

##### **334611 Software Reproducing**

This U.S. industry comprises establishments primarily engaged in mass reproducing computer software. These establishments do not generally develop any software; they mass reproduce data and programs on magnetic media, such as diskettes, tapes, or cartridges. Establishments in this industry mass reproduce products, such as CD-ROMs and game cartridges.

The data published with NAICS code 334611 include the following SIC industries:

7379 Computer Related Services, n.e.c. (pt)

##### **334612 Prerecorded Compact Disc (Except Software), Tape, and Record Reproducing**

This U.S. industry comprises establishments primarily engaged in mass reproducing audio and video material on magnetic or optical media. Examples of products mass reproduced by these establishments are audio compact discs, prerecorded audio and video cassettes, and laser discs.

The data published with NAICS code 334612 include the following SIC industries:

3652 Prerecorded records and tapes

7819 Services allied to motion pictures (pt)

##### **334613 Magnetic and Optical Recording Media Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing magnetic and optical recording media, such as blank magnetic tape, blank diskettes, blank optical discs, hard drive media, and blank magnetic tape cassettes.

The data published with NAICS code 334613 include the following SIC industry:

3695 Magnetic and optical recording media

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334613 do not include establishments primarily engaged in the manufacture of magnetic tape cleaners. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **335 Electrical Equipment, Appliance, and Component Manufacturing**

Industries in the Electrical Equipment, Appliance, and Component Manufacturing subsector manufacture products that generate, distribute and use electrical power. Electric lighting equipment manufacturing establishments produce electric lamp bulbs, lighting fixtures, and parts. Household appliance manufacturing establishments make both small and major electrical appliances and parts. Electrical equipment manufacturing establishments make goods, such as electric motors, generators, transformers, and switchgear apparatus. Other electrical equipment and component manufacturing establishments make devices for storing electrical power (e.g., batteries), for transmitting electricity (e.g., insulated wire), and wiring devices (e.g., electrical outlets, fuse boxes, and light switches).

#### **3351 Electric Lighting Equipment Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33511, Electric Lamp Bulb and Parts Manufacturing; and 33512, Lighting Fixture Manufacturing.

##### **33511 Electric Lamp Bulb and Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

###### **335110 Electric Lamp Bulb and Part Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

The data published with NAICS code 335110 include the following SIC industry:

3641 Electric lamps

##### **33512 Lighting Fixture Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except vehicular), nonelectric lighting equipment, lamp shades (except glass and plastics) and lighting fixture components (except current-carrying wiring devices).

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### **335121 Residential Electric Lighting Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fixed or portable residential electric lighting fixtures and lamp shades of metal, paper, or textiles. Residential electric lighting fixtures include those for use both inside and outside the residence.

The data published with NAICS code 335121 include the following SIC industries:

- 3089 Plastics products, n.e.c. (pt)
- 3645 Residential lighting fixtures
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335121 include establishments primarily engaged in the manufacture of plastic lampshades. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **335122 Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial, industrial, and institutional electric lighting fixtures.

The data published with NAICS code 335122 include the following SIC industry:

- 3646 Commercial lighting fixtures

### **335129 Other Lighting Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except residential, commercial, industrial, institutional, and vehicular electric lighting fixtures) and nonelectric lighting equipment.

The data published with NAICS code 335129 include the following SIC industries:

- 3648 Lighting equipment, n.e.c.
- 3699 Electrical equipment and supplies, n.e.c. (pt)

### **3352 Household Appliance Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33521, Small Electrical Appliance Manufacturing; and 33522, Major Appliance Manufacturing.

#### **33521 Small Electrical Appliance Manufacturing**

This industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares, household-type fans, household-type vacuum cleaners, and other electric household-type floor care machines.

#### **335211 Electric Housewares and Household Fan Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares for heating, cooking, and other purposes, and electric household-type fans (except attic fans).

The data published with NAICS code 335211 include the following SIC industry:

- 3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335211 do not include establishments primarily engaged in the manufacture of electric hair clippers for humans. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **335212 Household Vacuum Cleaner Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric vacuum cleaners, electric floor waxing machines, and other electric floor care machines typically for household use.

The data published with NAICS code 335212 include the following SIC industries:

- 3635 Household vacuum cleaners
- 3639 Household appliances, n.e.c. (pt)

#### **33522 Major Appliance Manufacturing**

This industry comprises establishments primarily engaged in manufacturing household-type cooking appliances, household-type laundry equipment, household-type refrigerators, upright and chest freezers, and other electrical and nonelectrical major household-type appliances, such as dishwashers, water heaters, and garbage disposal units.

#### **335221 Household Cooking Appliance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type electric and nonelectric cooking equipment (except small electric appliances and electric housewares).

The data published with NAICS code 335221 include the following SIC industry:

- 3631 Household cooking equipment

#### **335222 Household Refrigerator and Home Freezer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type refrigerators and upright and chest freezers.

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The data published with NAICS code 335222 include the following SIC industry:

3632 Household refrigerators and freezers

### **335224 Household Laundry Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type laundry equipment.

The data published with NAICS code 335224 include the following SIC industry:

3633 Household laundry equipment

### **335228 Other Major Household Appliance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric and nonelectric major household-type appliances (except cooking equipment, refrigerators, upright and chest freezers, and household-type laundry equipment).

The data published with NAICS code 335228 include the following SIC industry:

3639 Household appliances, n.e.c. (pt)

### **3353 Electrical Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33531, Electrical Equipment Manufacturing.

#### **33531 Electrical Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; and industrial controls.

#### **335311 Power, Distribution, and Specialty Transformer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers (except electronic components). Industrial-type and consumer-type transformers in this industry vary (e.g., step up or step down) voltage but do not convert alternating to direct or direct to alternating current.

The data published with NAICS code 335311 include the following SIC industries:

3548 Welding apparatus (pt)

3612 Transformers

#### **335312 Motor and Generator Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric motors (except internal combustion engine starting motors), power generators (except battery charging alternators for internal combustion engines), and motor generator sets (except turbine generator set units). This industry includes establishments rewinding armatures on a factory basis.

The data published with NAICS code 335312 include the following SIC industries:

3621 Motors and generators

7694 Armature rewinding shops (pt)

#### **335313 Switchgear and Switchboard Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing switchgear and switchboard apparatus.

The data published with NAICS code 335313 include the following SIC industry:

3613 Switchgear and switchboard apparatus

#### **335314 Relay and Industrial Control Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing relays, motor starters and controllers, and other industrial controls and control accessories.

The data published with NAICS code 335314 include the following SIC industry:

3625 Relays and industrial controls

#### **3359 Other Electrical Equipment and Component Manufacturing**

This industry group comprises establishments manufacturing electrical equipment and components (except electric lighting equipment, household-type appliances, transformers, switchgear, relays, motors, and generators).

#### **33591 Battery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing primary and storage batteries.

#### **335911 Storage Battery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing storage batteries.

The data published with NAICS code 335911 include the following SIC industry:

3691 Storage batteries

### **335912 Primary Battery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wet or dry primary batteries.

The data published with NAICS code 335912 include the following SIC industry:

3692 Primary batteries, dry and wet

### **33592 Communication and Energy Wire and Cable Manufacturing**

This industry comprises establishments insulating fiber-optic cable, and manufacturing insulated nonferrous wire and cable from nonferrous wire drawn in other establishments.

### **335921 Fiber Optic Cable Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing insulated fiber-optic cable from purchased fiber-optic strand.

The data published with NAICS code 335921 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

### **335929 Other Communication and Energy Wire Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing insulated wire and cable of nonferrous metals from purchased wire.

The data published with NAICS code 335929 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

### **33593 Wiring Device Manufacturing**

This industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices and noncurrent-carrying wiring devices for wiring electrical circuits.

### **335931 Current-Carrying Wiring Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices.

The data published with NAICS code 335931 include the following SIC industry:

3643 Current-carrying wiring devices

### **335932 Noncurrent-Carrying Wiring Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing noncurrent-carrying wiring devices.

The data published with NAICS code 335932 include the following SIC industry:

3644 Noncurrent-carrying wiring devices

### **33599 All Other Electrical Equipment and Component Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electrical equipment (except electric lighting equipment, household-type appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, and wiring devices).

### **335991 Carbon and Graphite Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon, graphite, and metal-graphite brushes and brush stock; carbon or graphite electrodes for thermal and electrolytic uses; carbon and graphite fibers; and other carbon, graphite, and metal-graphite products.

The data published with NAICS code 335991 include the following SIC industry:

3624 Carbon and graphite products

### **335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial and commercial electric apparatus and other equipment (except lighting equipment, household appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, wiring devices, and carbon and graphite products). This industry includes power converters (i.e., AC to DC and DC to AC), power supplies, surge suppressors, and similar equipment for industrial-type and consumer-type equipment.

The data published with NAICS code 335999 include the following SIC industries:

3629 Electrical industrial apparatus, n.e.c.

3699 Electrical equipment and supplies, n.e.c. (pt)

### **336 Transportation Equipment Manufacturing**

Industries in the Transportation Equipment Manufacturing subsector produce equipment for transporting people and goods. Transportation equipment is a type of machinery. An entire subsector is devoted to this activity because of the significance of its economic size in all three North American countries.

Establishments in this subsector utilize production processes similar to those of other machinery manufacturing establishments - bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly of components and subassemblies and their further assembly into finished vehicles tends to be a more common production process in this subsector than in the Machinery Manufacturing subsector.

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NAICS has industry groups for the manufacture of equipment for each mode of transport - road, rail, air, and water. Parts for motor vehicles warrant a separate industry group because of their importance and because parts manufacture requires less assembly, and the establishments that manufacture only parts are not as vertically integrated as those that make complete vehicles.

Land use motor vehicle equipment not designed for highway operation (e.g., agricultural equipment, construction equipment, and materials handling equipment) is classified in the appropriate NAICS subsector based on the type and use of the equipment.

### **3361 Motor Vehicle Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33611, Automobile and Light Duty Motor Vehicle Manufacturing; and 33612, Heavy Duty Truck Manufacturing.

#### **33611 Automobile and Light Duty Motor Vehicle Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing complete automobile and light duty motor vehicles (i.e., body and chassis or unibody) or (2) manufacturing chassis only.

##### **336111 Automobile Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete automobiles (i.e., body and chassis or unibody) or (2) manufacturing automobile chassis only.

The data published with NAICS code 336111 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

##### **336112 Light Truck and Utility Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete light trucks and utility vehicles (i.e., body and chassis) or (2) manufacturing light truck and utility vehicle chassis only. Vehicles made include light duty vans, pick-up trucks, minivans, and sport utility vehicles.

The data published with NAICS code 336112 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

### **33612 Heavy Duty Truck Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

### **336120 Heavy Duty Truck Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

The data published with NAICS code 336120 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

### **3362 Motor Vehicle Body and Trailer Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33621, Motor Vehicle Body and Trailer Manufacturing.

#### **33621 Motor Vehicle Body and Trailer Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing motor vehicle bodies and cabs or (2) manufacturing truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies and detachable trailer chassis. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

##### **336211 Motor Vehicle Body Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing truck and bus bodies and cabs and automobile bodies. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

The data published with NAICS code 336211 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3713 Truck and bus bodies

3714 Motor vehicle parts and accessories (pt)

##### **336212 Truck Trailer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing truck trailers, truck trailer chassis, cargo container chassis, detachable trailer bodies, and detachable trailer chassis for sale separately.

The data published with NAICS code 336212 include the following SIC industry:

3715 Truck trailers

### **336213 Motor Home Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing motor homes on purchased chassis and/or (2) manufacturing conversion vans on an assembly line basis. Motor homes are units where the motor and the living quarters are integrated in the same unit.

The data published with NAICS code 336213 include the following SIC industry:

3716 Motor homes

### **336214 Travel Trailer and Camper Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing travel trailers and campers designed to attach to motor vehicles; (2) manufacturing pickup coaches (i.e., campers) and caps (i.e., covers) for mounting on pickup trucks; and (3) manufacturing automobile, utility, and light-truck trailers. Travel trailers do not have their own motor but are designed to be towed by a motor unit, such as an automobile or a light truck.

The data published with NAICS code 336214 include the following SIC industries:

3792 Travel trailer and campers

3799 Transportation equipment, n.e.c. (pt)

### **3363 Motor Vehicle Parts Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33631, Motor Vehicle Gasoline Engine and Engine Parts Manufacturing; 33632, Motor Vehicle Electrical and Electronic Equipment Manufacturing; 33633, Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing; 33634, Motor Vehicle Brake System Manufacturing; 33635, Motor Vehicle Transmission and Power Train Parts Manufacturing; 33636, Motor Vehicle Seating and Interior Trim Manufacturing; 33637, Motor Vehicle Metal Stamping; and 33639, Other Motor Vehicle Parts Manufacturing.

#### **33631 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle gasoline engines and engine parts, whether or not for vehicular use.

#### **336311 Carburetor, Piston, Piston Ring, and Valve Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding carburetors, pistons, piston rings, and engine intake and exhaust valves.

The data published with NAICS code 336311 include the following SIC industries:

3592 Carburetors, pistons, rings, and valves

#### **336312 Gasoline Engine and Engine Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding gasoline motor vehicle engines and gasoline motor vehicle engine parts, excluding carburetors, pistons, piston rings, and valves.

The data published with NAICS code 336312 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

#### **33632 Motor Vehicle Electrical and Electronic Equipment Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing vehicular lighting and/or (2) manufacturing and/or rebuilding motor vehicle electrical and electronic equipment. The products made can be used for all types of transportation equipment (i.e., aircraft, automobiles, trains, ships).

#### **336321 Vehicular Lighting Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

The data published with NAICS code 336321 include the following SIC industry:

3647 Vehicular lighting equipment

#### **336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding electrical and electronic equipment for motor vehicles and internal combustion engines.

The data published with NAICS code 336322 include the following SIC industries:

3679 Electronic components, n.e.c. (pt)

3694 Engine electrical equipment

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336322 include establishments primarily engaged in the manufacture of electronic control modular chips for motor vehicles. The NAICS definitions will be fully implemented with the 2002 Economic Census.

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### **33633 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

### **336330 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

The data published with NAICS code 336330 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

### **33634 Motor Vehicle Brake System Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

### **336340 Motor Vehicle Brake System Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

The data published with NAICS code 336340 include the following SIC industries:

3292 Asbestos products (pt)

3714 Motor vehicle parts and accessories (pt)

### **33635 Motor Vehicle Transmission and Power Train Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

### **336350 Motor Vehicle Transmission and Power Train Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

The data published with NAICS code 336350 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

### **33636 Motor Vehicle Seating and Interior Trim Manufacturing**

This industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

### **336360 Motor Vehicle Seating and Interior Trim Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

The data published with NAICS code 336360 include the following SIC industries:

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

2531 Public building and related furniture (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336360 do not include establishments primarily engaged in the manufacture of metal motor vehicle seat frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33637 Motor Vehicle Metal Stamping**

This industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

### **336370 Motor Vehicle Metal Stamping**

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

The data published with NAICS code 336370 include the following SIC industry:

3465 Automotive stampings

### **33639 Other Motor Vehicle Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, and motor vehicle stampings).

### **336391 Motor Vehicle Air-Conditioning Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles, such as automobiles, trucks, buses, aircraft, farm machinery, construction machinery, and other related vehicles.

The data published with NAICS code 336391 include the following SIC industry:

3585 Refrigeration and heating equipment (pt)

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### **336399 All Other Motor Vehicle Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, motor vehicle stampings, and motor vehicle air-conditioning systems and compressors).

The data published with NAICS code 336399 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336399 do not include establishments primarily engaged in the manufacture of luggage and utility racks or trailer hitches. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3364 Aerospace Product and Parts Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33641, Aerospace Product and Parts Manufacturing.

#### **33641 Aerospace Product and Parts Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing complete aircraft, missiles, or space vehicles; (2) manufacturing aerospace engines, propulsion units, auxiliary equipment or parts; (3) developing and making prototypes of aerospace products; (4) aircraft conversion (i.e., major modifications to systems); and (5) complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

##### **336411 Aircraft Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing or assembling complete aircraft; (2) developing and making aircraft prototypes; (3) aircraft conversion (i.e., major modifications to systems); and (4) complete aircraft overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

The data published with NAICS code 336411 include the following SIC industry:

3721 Aircraft

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336411 do not include establishments primarily engaged in the manufacture of target drones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **336412 Aircraft Engine and Engine Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing aircraft engines and engine parts; (2) developing and making prototypes of aircraft engines and engine parts; (3) aircraft propulsion system conversion (i.e., major modifications to systems); and (4) aircraft propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft propulsion system to original design specifications).

The data published with NAICS code 336412 include the following SIC industry:

3724 Aircraft engines and engine parts

##### **336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing aircraft parts or auxiliary equipment (except engines and aircraft fluid power subassemblies) and/or (2) developing and making prototypes of aircraft parts and auxiliary equipment. Auxiliary equipment includes such items as crop dusting apparatus, armament racks, inflight refueling equipment, and external fuel tanks.

The data published with NAICS code 336413 include the following SIC industry:

3728 Aircraft parts and equipment, n.e.c. (pt)

##### **336414 Guided Missile and Space Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete guided missiles and space vehicles and/or (2) developing and making prototypes of guided missile or space vehicles.

The data published with NAICS code 336414 include the following SIC industry:

3761 Guided missiles and space vehicles

##### **336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and/or space vehicle propulsion units and propulsion unit parts and/or (2) developing and making prototypes of guided missile and space vehicle propulsion units and propulsion unit parts.

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The data published with NAICS code 336415 include the following SIC industry:

3764 Space propulsion units and parts

### **336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and space vehicle parts and auxiliary equipment (except guided missile and space vehicle propulsion units and propulsion unit parts) and/or (2) developing and making prototypes of guided missile and space vehicle parts and auxiliary equipment.

The data published with NAICS code 336419 include the following SIC industry:

3769 Space vehicle equipment, n.e.c.

### **3365 Railroad Rolling Stock Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33651, Railroad Rolling Stock Manufacturing.

#### **33651 Railroad Rolling Stock Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

#### **336510 Railroad Rolling Stock Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames, and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

The data published with NAICS code 336510 include the following SIC industries:

3531 Construction machinery (pt)

3743 Railroad equipment (pt)

### **3366 Ship and Boat Building**

This NAICS industry group includes establishments classified in NAICS Industry 33661, Ship and Boat Building.

### **33661 Ship and Boat Building**

This industry comprises establishments primarily engaged in operating shipyards or boat yards (i.e., ship or boat manufacturing facilities). Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Boats are defined as watercraft typically suitable or intended for personal use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

#### **336611 Ship Building and Repairing**

This U.S. industry comprises establishments primarily engaged in operating a shipyard. Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

The data published with NAICS code 336611 include the following SIC industry:

3731 Ship building and repairing

#### **336612 Boat Building**

This U.S. industry comprises establishments primarily engaged in building boats. Boats are defined as watercraft not built in shipyards and typically of the type suitable or intended for personal use.

The data published with NAICS code 336612 include the following SIC industry:

3732 Boat building and repairing (pt)

### **3369 Other Transportation Equipment Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles and parts, aerospace products and parts, railroad rolling stock, ship building, and boat manufacturing).

#### **33699 Other Transportation Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, metal tricycles, complete military armored vehicles, tanks, self-propelled weapons, vehicles pulled by draft animals, and other transportation equipment (except motor vehicles, boats, ships, railroad rolling stock, and aerospace products), including parts thereof.

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### **336991 Motorcycle, Bicycle, and Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, tricycles and similar equipment and parts.

The data published with NAICS code 336991 include the following SIC industries:

3751 Motorcycles, bicycles, and parts

3944 Games, toys, and children's vehicles (pt)

### **336992 Military Armored Vehicle, Tank, and Tank Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing complete military armored vehicles, combat tanks, specialized components for combat tanks, and self-propelled weapons.

The data published with NAICS code 336992 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3795 Tanks and tank components

### **336999 All Other Transportation Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles, motor vehicle parts, boats, ships, railroad rolling stock, aerospace products, motorcycles, bicycles, armored vehicles, and tanks).

The data published with NAICS code 336999 include the following SIC industry:

3799 Transportation equipment, n.e.c. (pt)

### **337 Furniture and Related Product Manufacturing**

Industries in the Furniture and Related Product Manufacturing subsector make furniture and related articles, such as mattresses, window blinds, cabinets, and fixtures. The processes used in the manufacture of furniture include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan. However, the production process for furniture is not solely bending metal, cutting and shaping wood, or extruding and molding plastics. Design and fashion trends play an important part in the production of furniture. The integrated design of the article for both esthetic and functional qualities is also a major part of the process of manufacturing furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers.

Furniture may be made of any material, but the most common ones used in North America are metal and wood. Furniture manufacturing establishments may specialize in making articles primarily from one material. Some of the

equipment required to make a wooden table, for example, is different from that used to make a metal one. However, furniture is usually made from several materials. A wooden table might have metal brackets, and a wooden chair, a fabric or plastics seat. Therefore, in NAICS, furniture initially is classified based on the type of furniture (application for which it is designed) rather than the material used. For example, an upholstered sofa is treated as household furniture, although it may also be used in hotels or offices.

When classifying furniture according to the component material from which it is made, furniture made from more than one material is classified based on the material used in the frame, or if there is no frame, the predominant component material. Upholstered household furniture (excluding kitchen and dining room chairs with upholstered seats) is classified without regard to the frame material. Kitchen or dining room chairs with upholstered seats are classified according to the frame material.

Furniture may be made on a stock or custom basis and may be shipped assembled or unassembled (i.e., knock-down). The manufacture of furniture parts and frames is included in this subsector.

Some of the processes used in furniture manufacturing are similar to processes that are used in other segments of manufacturing. For example, cutting and assembly occurs in the production of wood trusses that are classified in Subsector 321, Wood Product Manufacturing. However, the multiple processes that distinguish wood furniture manufacturing from wood product manufacturing warrant inclusion of wooden furniture manufacturing in the Furniture and Related Product Manufacturing subsector. Metal furniture manufacturing uses techniques that are also employed in the manufacturing of roll-formed products classified in Subsector 332, Fabricated Metal Product Manufacturing. The molding process for plastics furniture is similar to the molding of other plastics products. However, plastics furniture producing establishments tend to specialize in furniture.

NAICS attempts to keep furniture manufacturing together, but there are two notable exceptions: seating for transportation equipment and laboratory and hospital furniture. These exceptions are related to that fact that some of the aspects of the production process for these products, primarily the design, are highly integrated with that of other manufactured goods, namely motor vehicles and health equipment.

### **3371 Household and Institutional Furniture and Kitchen Cabinet Manufacturing**

This industry group comprises establishments manufacturing household-type furniture, such as living room, kitchen, and bedroom furniture, and institutional (i.e., public building) furniture, such as furniture for schools, theaters, and churches.

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### **33711 Wood Kitchen Cabinet and Countertop Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

### **337110 Wood Kitchen Cabinet and Countertop Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

The data published with NAICS code 3371110 include the following SIC industries:

2434 Wood kitchen cabinets

2541 Wood partitions and fixtures (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337110 include establishments primarily engaged in manufacturing wood countertops as part of wood office and store fixtures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33712 Household and Institutional Furniture Manufacturing**

This industry comprises establishments primarily engaged in manufacturing household-type and public building furniture (i.e., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

### **337121 Upholstered Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing upholstered household-type furniture. The furniture may be made on a stock or custom basis.

The data published with NAICS code 337121 include the following SIC industries:

2512 Upholstered household furniture

2515 Mattresses and bedsprings (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337121 do not include establishments primarily engaged in manufacturing upholstered metal household furniture. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337122 Nonupholstered Wood Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonupholstered wood household-type furniture and freestanding cabinets (except television, radio, and sewing machine cabinets). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337122 include the following SIC industries:

2511 Wood household furniture

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337122 include establishments primarily engaged in manufacturing wood box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337124 Metal Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal household-type furniture and freestanding cabinets. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337124 include the following SIC industry:

2514 Metal household furniture

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337124 include establishments primarily engaged in manufacturing upholstered metal household furniture or metal box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337125 Household Furniture (Except Wood and Metal) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type furniture of materials other than wood or metal, such as plastics, reed,

rattan, wicker, and fiberglass. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337125 include the following SIC industry:

2519 Household furniture, n.e.c.

### **337127 Institutional Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing institutional-type furniture (e.g., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337127 include the following SIC industries:

2531 Public building and related furniture (pt)

2599 Furniture and fixtures, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337127 do not include establishments primarily engaged in manufacturing wood or nonwood lunchroom tables and chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337129 Wood Television, Radio, and Sewing Machine Cabinet Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood cabinets used as housings by television, stereo, loudspeaker, and sewing machine manufacturers.

The data published with NAICS code 337129 include the following SIC industry:

2517 Wood TV and radio cabinets

### **3372 Office Furniture (Including Fixtures) Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33721, Office Furniture (Including Fixtures) Manufacturing.

### **33721 Office Furniture (Including Fixtures) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing office furniture and/or office and store fixtures. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

### **337211 Wood Office Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337211 include the following SIC industry:

2521 Wood office furniture

### **337212 Custom Architectural Woodwork and Millwork Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing custom designed interiors consisting of architectural woodwork and fixtures utilizing wood, wood products, and plastics laminates. All of the industry output is made to individual order on a job shop basis and requires skilled craftsmen as a labor input. A job might include custom manufacturing of display fixtures, gondolas, wall shelving units, entrance and window architectural detail, sales and reception counters, wall paneling, and matching furniture.

The data published with NAICS code 337212 include the following SIC industry:

2541 Wood partitions and fixtures (pt)

### **337214 Office Furniture (Except Wood) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonwood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337214 include the following SIC industry:

2522 Office furniture, except wood

### **337215 Showcase, Partition, Shelving, and Locker Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood and nonwood office and store fixtures, shelving, lockers, frames, partitions, and related fabricated products of wood and nonwood materials, including plastics laminated fixture tops. The products are made on a stock basis and may be assembled or unassembled (i.e., knockdown). Establishments exclusively making furniture parts (e.g., frames) are included in this industry.

The data published with NAICS code 337215 include the following SIC industries:

2426 Hardwood dimension and flooring mills (pt)

2541 Wood partitions and fixtures (pt)

2542 Partitions and fixtures, except wood

3499 Fabricated metal products, n.e.c. (pt)

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337215 include establishments primarily engaged in manufacturing wood or non-wood lunchroom tables and chairs, but do not include establishments primarily engaged in manufacturing wood or metal box spring frames, finished plastic furniture parts, convertible bed sleeper mechanisms or chair glides. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3379 Other Furniture Related Product Manufacturing**

This industry group comprises establishments manufacturing furniture related products, such as mattresses, blinds, and shades.

#### **33791 Mattress Manufacturing**

This industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

#### **337910 Mattress Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

The data published with NAICS code 337910 include the following SIC industry:

2515 Mattresses and bedsprings (pt)

#### **33792 Blind and Shade Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

#### **337920 Blind and Shade Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

The data published with NAICS code 337920 include the following SIC industry:

2591 Drapery hardware, blinds, and shades

### **339 Miscellaneous Manufacturing**

Industries in the Miscellaneous Manufacturing subsector make a wide range of products that cannot readily be classified in specific NAICS subsectors in manufacturing. Processes used by these establishments vary significantly, both among and within industries. For example, a variety of manufacturing processes are used in manufacturing sporting and athletic goods that include products, such as tennis racquets and golf balls. The processes for these products differ from each other, and the processes differ significantly from the fabrication processes used in making dolls or toys, the melting and shaping of precious metals to make jewelry, and the bending, forming, and assembly used in making medical products.

The industries in this subsector are defined by what is made rather than how it is made. Although individual establishments might be appropriately classified elsewhere in the NAICS structure, for historical continuity, these product-based industries were maintained. In most cases, no one process or material predominates for an industry.

Establishments in this subsector manufacture products as diverse as medical equipment and supplies, jewelry, sporting goods, toys, and office supplies.

#### **3391 Medical Equipment and Supplies Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33911, Medical Equipment and Supplies Manufacturing.

#### **33911 Medical Equipment and Supplies Manufacturing**

This industry comprises establishments primarily engaged in manufacturing medical equipment and supplies. Examples of products made by these establishments are laboratory apparatus and furniture, surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, dentures, and orthodontic appliances.

#### **339111 Laboratory Apparatus and Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing laboratory apparatus and laboratory and hospital furniture (except dental). Examples of products made by these establishments are hospital beds, operating room tables, laboratory balances and scales, furnaces, ovens, centrifuges, cabinets, cases, benches, tables, and stools.

The data published with NAICS code 339111 include the following SIC industry:

3821 Laboratory apparatus and furniture

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339111 do not include establishments primarily engaged in the manufacture of hospital beds or operating tables. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **339112 Surgical and Medical Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus (except electrotherapeutic, electromedical, and irradiation apparatus). Examples of products made by these establishments are syringes, hypodermic needles, anesthesia apparatus, blood transfusion equipment, catheters, surgical clamps, and medical thermometers.

The data published with NAICS code 339112 include the following SIC industries:

3829 Measuring and controlling devices, n.e.c. (pt)

3841 Surgical and medical instruments

### **339113 Surgical Appliance and Supplies Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing surgical appliances and supplies. Examples of products made by these establishments are orthopedic devices, prosthetic appliances, surgical dressings, crutches, surgical sutures, and personal industrial safety devices (except protective eyewear).

The data published with NAICS code 339113 include the following SIC industries:

2599 Furniture and fixtures, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339113 do not include establishments primarily engaged in the manufacture of rubber gloves and life jackets. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **339114 Dental Equipment and Supplies Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing dental equipment and supplies used by dental laboratories and offices of dentists, such as dental chairs, dental instrument delivery systems, dental hand instruments, and dental impression material.

The data published with NAICS code 339114 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3843 Dental equipment and supplies

### **339115 Ophthalmic Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ophthalmic goods. Examples of products made by these establishments are prescription eyeglasses (except manufactured in a retail setting), contact lenses, sunglasses, eyeglass frames, and reading glasses made to standard powers.

The data published with NAICS code 339115 include the following SIC industry:

3851 Ophthalmic goods

### **339116 Dental Laboratories**

This U.S. industry comprises establishments primarily engaged in manufacturing dentures, crowns, bridges, and orthodontic appliances customized for individual application.

The data published with NAICS code 339116 include the following SIC industry:

8072 Dental laboratories

### **3399 Other Miscellaneous Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33991, Jewelry and Silverware Manufacturing; 33992, Sporting and Athletic Goods Manufacturing; 33993, Doll, Toy, and Game Manufacturing; 33994, Office Supplies (Except Paper) Manufacturing; 33995, Sign Manufacturing; and 33999, All Other Miscellaneous Manufacturing.

### **33991 Jewelry and Silverware Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching jewelry; (2) manufacturing metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (3) manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter cutlery and flatware; (4) manufacturing, engraving, chasing, or etching personal metal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (5) stamping coins; (6) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (7) cutting, slabbing, tumbling, carving, engraving, polishing, or faceting precious or semiprecious stones and gems; (8) recutting, repolishing, and setting gem stones; and (9) drilling, sawing, and peeling cultured and costume pearls.

### **339911 Jewelry (Except Costume) Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching precious metal solid or precious metal clad jewelry; (2) manufacturing, engraving, chasing, or etching personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases) made of precious solid or clad metal; and (3) stamping coins.

The data published with NAICS code 339911 include the following SIC industries:

3479 Metal coating and allied services (pt)

3911 Jewelry, precious metal

### **339912 Silverware and Holloware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter flatware and other plated ware.

The data published with NAICS code 339912 include the following SIC industries:

3479 Metal coating and allied services (pt)

3914 Silverware and plated ware (pt)

### **339913 Jewelers' Material and Lapidary Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (2) cutting, slabbing, tumbling, carving, engraving, polishing or faceting precious or semiprecious stones and gems; (3) recutting, repolishing, and setting gem stones; and (4) drilling, sawing, and peeling cultured pearls.

The data published with NAICS code 339913 include the following SIC industry:

3915 Jewelers' materials and lapidary work

### **339914 Costume Jewelry and Novelty Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing, engraving, chasing, and etching costume jewelry; and/or (2) manufacturing, engraving, chasing, or etching nonprecious metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases). This industry includes establishments primarily engaged in manufacturing precious plated jewelry and precious plated personal goods.

The data published with NAICS code 339914 include the following SIC industries:

3479 Metal coating and allied services (pt)

3499 Fabricated metal products, n.e.c. (pt)

3961 Costume jewelry

### **33992 Sporting and Athletic Goods Manufacturing**

This industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

#### **339920 Sporting and Athletic Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

The data published with NAICS code 339920 include the following SIC industry:

3949 Sporting and athletic goods, n.e.c.

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339920 do not include establishments primarily engaged in the manufacture of wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33993 Doll, Toy, and Game Manufacturing**

This industry comprises establishments primarily engaged in manufacturing dolls, toys, and games, such as complete dolls, doll parts, doll clothes, action figures, toys, games (including electronic), hobby kits, and children's vehicles (except metal bicycles and tricycles).

#### **339931 Doll and Stuffed Toy Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing complete dolls, doll parts, and doll clothes, action figures, and stuffed toys.

The data published with NAICS code 339931 include the following SIC industry:

3942 Dolls

#### **339932 Game, Toy, and Children's Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing games (including electronic), toys, and children's vehicles (except bicycles and metal tricycles).

The data published with NAICS code 339932 include the following SIC industry:

3944 Games, toys, and children's vehicles (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339932 do not include

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establishments primarily engaged in the manufacture of rubber toys, except dolls or embroidery kits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33994 Office Supplies (Except Paper) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing office supplies. Examples of products made by these establishments are pens, pencils, felt tip markers, crayons, chalk, pencil sharpeners, staplers, hand operated stamps, modeling clay, and inked ribbons.

#### **339941 Pen and Mechanical Pencil Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing pens, ballpoint pen refills and cartridges, mechanical pencils, and felt tipped markers.

The data published with NAICS code 339941 include the following SIC industry:

3951 Pens and mechanical pencils

#### **339942 Lead Pencil and Art Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonmechanical pencils and art goods. Examples of products made by these establishments are pencil leads, crayons, chalk, framed blackboards, pencil sharpeners, staplers, artists' palettes and paints, and modeling clay.

The data published with NAICS code 339942 include the following SIC industries:

2531 Public building and related furniture (pt)

3579 Office machines, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

#### **339943 Marking Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing marking devices, such as hand operated stamps, embossing stamps, stamp pads, and stencils.

The data published with NAICS code 339943 include the following SIC industry:

3953 Marking devices

#### **339944 Carbon Paper and Inked Ribbon Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon paper and inked ribbons.

The data published with NAICS code 339944 include the following SIC industry:

3955 Carbon paper and inked ribbons

### **33995 Sign Manufacturing**

This industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

#### **339950 Sign Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

The data published with NAICS code 339950 include the following SIC industries:

3993 Signs and advertising specialties

### **33999 All Other Miscellaneous Manufacturing**

This industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), and signs).

#### **339991 Gasket, Packing, and Sealing Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gaskets, packing, and sealing devices of all materials.

The data published with NAICS code 339991 include the following SIC industry:

3053 Gaskets, packing and sealing devices

#### **339992 Musical Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing musical instruments (except toys).

The data published with NAICS code 339992 include the following SIC industry:

3931 Musical instruments

#### **339993 Fastener, Button, Needle, and Pin Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fasteners, buttons, needles, pins, and buckles (except precious metals or precious and semiprecious stones and gems).

The data published with NAICS code 339993 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3965 Fasteners, buttons, needles, and pins

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### **339994 Broom, Brush, and Mop Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing brooms, mops, and brushes.

The data published with NAICS code 339994 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

3991 Brooms and brushes

### **339995 Burial Casket Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing burial caskets, cases, and vaults (except concrete).

The data published with NAICS code 339995 include the following SIC industry:

3995 Burial caskets

### **339999 All Other Miscellaneous Manufacturing**

This U.S. industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical

equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), musical instruments, fasteners, buttons, needles, pins, brooms, brushes, mops, and burial caskets).

The data published with NAICS code 339999 include the following SIC industries:

2499 Wood products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339999 do not include establishments primarily engaged in the manufacture of electronic cigarette lighters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

# Appendix C.

## Coverage and Methodology

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### MAIL/NONMAIL UNIVERSE

The manufacturing universe includes about 400,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing, but not those industries leaving the manufacturing sector in the classification change. The amounts of information requested from manufacturing establishments were dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the annual survey of manufactures (ASM). The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the manufacturing establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cutoff was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these

establishments but were included in the product and material “not specified by kind” (nsc) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously re-coded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census – Manufacturing, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as “All other” industries within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into three groups:

- a. ASM sample establishments.

This group accounts for approximately 15 percent of all manufacturing establishments. The ASM panel covers all the units of large manufacturing establishments as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size. For more information, see the Description of the ASM Survey Sample.

In an economic census year, the ASM report form (MA-1000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply additional information on gross book value of assets and capital expenditures. ASM establishments were also requested to provide information on retirements, depreciation, rental payments, and supplemental labor costs. For establishments not included in the ASM, these additional items were estimated using relationships observed in the ASM establishment data. The census statistics for these variables are a sum of the ASM establishment data and the estimated data for non-ASM establishments. ASM establishments were also requested to provide information for selected purchased services. The census statistics for the purchased service items were derived solely from the ASM establishments. See Appendix A, Explanation of Terms for an explanation of these items. The census part of the report form is 1 of 220 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of this many forms to canvass the 480 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries as well as secondary products and miscellaneous services that establishments classified in these industries were likely to perform. Respondents were requested to identify the products, the value of each product, and, in many cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant materials not identified on the form.

A wide variety of special inquiries was included to measure activities peculiar to a given industry, such as operations performed and equipment used.

b. Large and medium establishments (non-ASM).

Approximately 30 percent of all manufacturing establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 220 economic census – manufacturing regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.

c. Small single-establishment companies (non-ASM).

This group includes approximately 15 percent of all manufacturing establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. These establishments received 1 of the 31 versions of the short form, which requested summary product and material data and totals but no details on employment, payroll, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products and materials consumed was not collected on the short form; thus, its use would increase the value of the nsk categories.

## **INDUSTRY CLASSIFICATION OF ESTABLISHMENTS**

Each of the establishments covered in the 1997 Economic Census – Manufacturing was classified in 1 of 480 industries (473 manufacturing industries and 7 former manufacturing industries) in accordance with the industry definitions in the 1997 NAICS Manual. This is the first edition of the NAICS Manual and it is a major change from the 1987 SIC Manual that was used previously. Appendix A of the 1997 NAICS Manual notes the comparability between the 1987 SIC and 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product class and product comparability between the two systems for data in this report.

In the NAICS system, an industry is generally defined as a group of establishments that have similar production processes. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the manufacturing sector for 1997, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). This represents an expansion of the four-digit SIC-based U.S. industries from 459 in 1987. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products, and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits. These counts do not include the seven former manufacturing industries that are included in the 1997 Economic Census – Manufacturing.

For the 1997 Economic Census – Manufacturing, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value. For 1997, there were no “resistance rules” or “frozen industries.”

In ASM years, establishments included in the ASM sample with certainty weights are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year. However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The results of these rules covering the switching of plants from one industry classification to another are that some industries comprise different mixes of establishments in different survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the six-digit NAICS level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by manufacture, value of shipments, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics, especially the value of shipments, to the product statistics, the composition of the industry’s output should be considered.

The extent to which industry and product statistics may be matched with each other is measured by the primary product specialization ratio and the coverage ratio. The primary product specialization ratio is the proportion of industry shipments accounted for by the primary products of establishments classified in the industry. The coverage ratio is the proportion of product shipments accounted for by establishments classified in the industry.

## **ESTABLISHMENT BASIS OF REPORTING**

The economic census – manufacturing is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location or establishment. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports if the plant records permit such a separation and if the activities are substantial in size.

In 1997, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures except for data on number of establishments for a few industries.

The 1997 Economic Census – Manufacturing excludes data for central administrative offices (CAOs). These would include separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company. These data are published in a separate report series.

## **DESCRIPTION OF THE ASM SURVEY SAMPLE**

The annual survey of manufactures (ASM) sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1994 survey year based on the 1992 Census of Manufactures. This sample will be in place through the 1998 ASM.

In 1992, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the 1992 manufacturing population was partitioned into two components for developing estimates within the ASM; a mail stratum and a nonmail stratum.

**Mail stratum.** The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies that operate at more than one physical location). Approximately 230,000 of the 370,000 establishments in the 1992 census were assigned to the mail stratum. On an annual basis, the mail stratum is supplemented with larger, newly active single-location companies identified from a list provided by the Internal Revenue Service (IRS) and new manufacturing locations of multiunit companies identified from the Census Bureau's Company Organization Survey (COS).

For the 1994 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1992 census. Supplemental samples representing both 1993 and 1994 births (newly active establishments that were not included in the 1992 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 1998.

The 1994-98 ASM sample design is similar to the one used since 1984. Companies in the 1992 Census of Manufactures with manufacturing shipments of at least \$500 million were defined as company certainties. For these large companies, each manufacturing establishment is included in the mail sample. For the 1994-98 sample, there are approximately 650 certainty companies collectively accounting for over 18,000 establishments.

For the remaining portion of the mail component of the survey, the establishment was defined as the sample unit. All establishments with 250 employees or more were defined as employment certainties. In addition, all establishments producing products in SIC 3571 (Electronic Computers) were defined as certainties. Across these three arbitrary certainty classes, there were approximately 25,000 establishments included in the sample with certainty. Collectively, these certainty establishments accounted for approximately 80 percent of the total value of shipments in the 1992 Census of Manufactures.

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1992 industry classification, its 1992 product class data, and the historical variability of the year-to-year estimates of the product class estimates. For each product class (1,755) and four-digit industry (459), a desired reliability

constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

This method of assigning probabilities based on product class shipments is motivated by our primary desire to produce reliable estimates of both product class and industry shipments. The high correlation between shipments and employment, value-added, and other general statistics assures that these variables will also be well represented by the sample. The actual sample selection procedure uses an independent chance of selection method (Poisson sampling) which permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

**Nonmail component.** The initial nonmail component of the survey was comprised of approximately 140,000 small, single-establishment companies that were tabulated as administrative records in the 1992 Census of Manufactures. The nonmail stratum is also supplemented annually using the list of newly active single-location companies provided by the Internal Revenue Service (IRS) and payroll cutoffs. Companies with payroll below the payroll cutoff are added to the nonmail stratum. For this portion of the population, sampling is not used. The data for this group are estimated based on selected information obtained annually from the administrative records of the IRS and Social Security Administration (SSA). This administrative information, which includes payroll, total employment, industry classification, and physical location, is obtained under conditions which safeguard the confidentiality of both tax and census records.

## DESCRIPTION OF THE ASM ESTIMATING PROCEDURE

Most of the ASM estimates derived for the mail stratum are computed using a difference estimator. At the establishment level, there is a strong correlation between the current-year data values and the corresponding 1992 (base) data values. Therefore, within the mailed stratum, for each item at each level of aggregation, an estimate of the "difference" between the current year and the base year is computed from sample cases and added to the corresponding base-year values. For the 1993-1997 ASM estimates, the 1992 Census of Manufactures values serve as the base year. For the 1998 ASM, the base will be updated to be the 1997 Economic Census – Manufacturing.

Due to the positive year-to-year correlation, estimates derived using this methodology are generally more reliable than comparable estimates developed from the current sample data alone. Estimates for the capital expenditures variables are not generated using the difference

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estimator because the year-to-year correlations are considerably weaker. The standard linear estimator is used for these variables.

For the nonmail stratum, estimates for payroll and employment are directly tabulated from the administrative-record data provided by IRS and SSA. Estimates of data other than payroll and employment are developed from industry averages. Although the nonmail stratum contains approximately 170,000 individual establishments in 1994, it accounts for less than 2 percent of the estimate for total value of shipments at the total manufacturing level.

Corresponding estimates for the mail and nonmail components are combined to produce the estimates included in this publication.

### **QUALIFICATIONS OF THE ASM DATA**

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sample lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the ASM is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected ASM statistics in this report. They are represented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.

From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.

From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

### **DATA FROM THE CURRENT INDUSTRIAL REPORTS (CIR)**

The CIR program provides product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. When detail product data are collected in the CIR, they are not also collected in the census. However, the annual CIR data are included in the census Product Summary report.

The CIR program uses a unified data collection, processing, and publication system. The Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic

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census – manufacturing. The economic census – manufacturing provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. While the CIR program includes both mandatory and voluntary surveys, the annual data are mandatory.

#### **DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS**

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

#### **VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS**

The 1997 Economic Census – Manufacturing shows value of shipments data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment.

# Appendix D. Geographic Notes

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## **WASHINGTON**

**Bothell** is in King and Snohomish Counties.

**Burien** was incorporated in February 1993.

**Edgewood** was incorporated in February 1996.

**Enumclaw** is in King and Pierce Counties.

**Lakewood** was incorporated in February 1996.

**Milton** is in King and Pierce Counties.

**Newcastle** was incorporated in September 1994.

**Pacific** is in King and Pierce Counties.

**Shoreline** was incorporated in August 1995.

**University Place** was incorporated in August 1995.

**Woodinville** was incorporated in March 1993.

**Woodland** is in Clark and Cowlitz Counties.

# Appendix E. Metropolitan Areas

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## WASHINGTON

### **Bellingham, WA MSA**

Whatcom County, WA

### **Bremerton, WA PMSA**

Kitsap County, WA

### **Olympia, WA PMSA**

Thurston County, WA

### **Portland—Vancouver, OR—WA PMSA**

Clackamas County, OR

Columbia County, OR

Multnomah County, OR

Washington County, OR

Yamhill County, OR

Clark County, WA

### **Portland—Salem, OR—WA CMSA**

Portland—Vancouver, OR—WA PMSA

Clackamas County, OR

Columbia County, OR

Multnomah County, OR

Washington County, OR

Yamhill County, OR

Clark County, WA

Salem, OR PMSA

Marion County, OR

Polk County, OR

### **Richland—Kennewick—Pasco, WA MSA**

Benton County, WA

Franklin County, WA

### **Seattle—Bellevue—Everett, WA PMSA**

Island County, WA

King County, WA

Snohomish County, WA

### **Seattle—Tacoma—Bremerton, WA CMSA**

Bremerton, WA PMSA

Kitsap County, WA

Olympia, WA PMSA

Thurston County, WA

Seattle—Bellevue—Everett, WA PMSA

Island County, WA

King County, WA

Snohomish County, WA

Tacoma, WA PMSA

Pierce County, WA

### **Spokane, WA MSA**

Spokane County, WA

### **Tacoma, WA PMSA**

Pierce County, WA

### **Yakima, WA MSA**

Yakima County, WA

